

ATTACHMENT A

Google's Motion for Summary Judgment
Re "Zone Scenes" Patents

- 1) Asserted Claims of '885 and '966 Patent Are Invalid as Obvious**
- 2) Google's Redesigned Devices Do Not Infringe**

1. The “Zone Scenes” Patents (‘885 and ‘966) Are Invalid Under 35 U.S.C. 103

Sonos 2005 System and Sonos Forums Disclosed All Claim Limitations



Issue: Would it have been obvious to try saving named groups of speakers, as disclosed by Sonos Forums, to the Sonos 2005 System?

Answer: Yes

Sonos 2005 System and Sonos Forums Are Prior Art to Both Patents



scene” that has been selected for invocation after its creation. *See* ’885 Patent claim 1. And the asserted claims of the ’966 Patent capture similar functionality from the perspective of the controller. *See* ’966 Patent claim 1. However, the Sonos Forum posts failed to disclose *any* of

Dkt. 509-2 (Sonos Opp. to MSJ) at 14

Sonos 2005 System + Sonos Forums Renders Asserted Claims Obvious

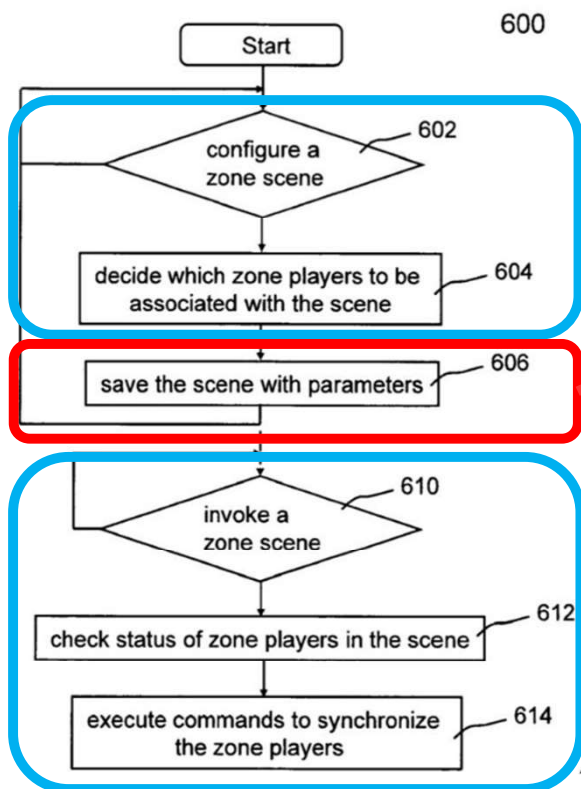
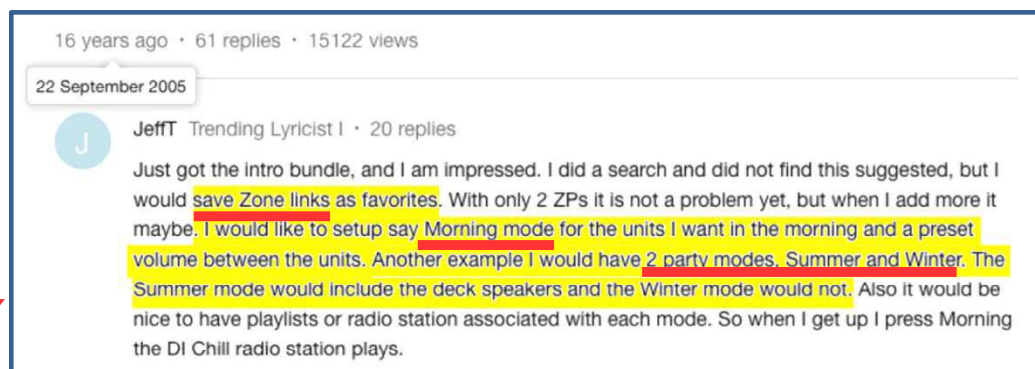
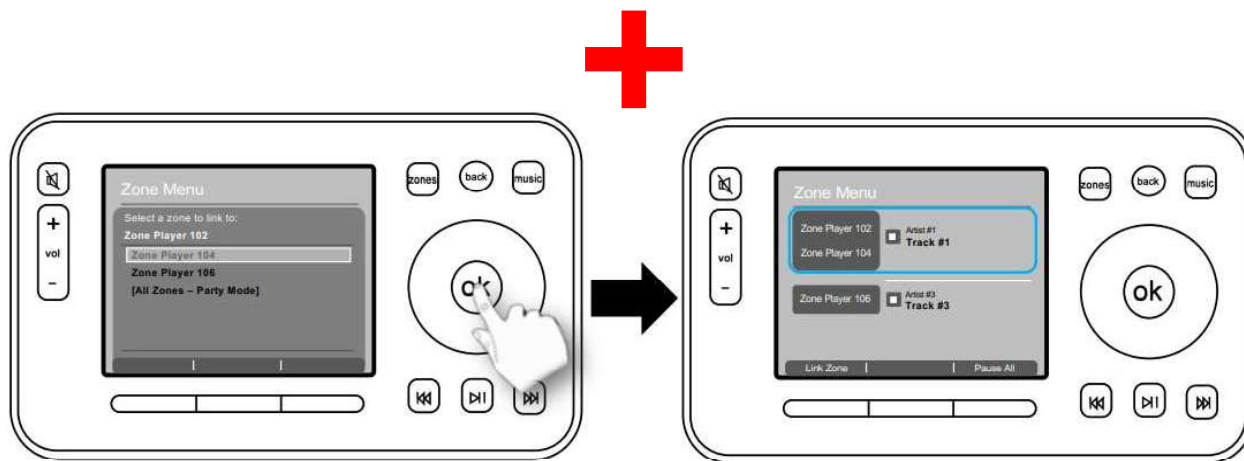


FIG. 6



Dkt. 497-4 (Almeroth Reb. Rep.) pp. 164-165



Almeroth Supp. Reb. Dem. at 14, 17

No Dispute Sonos 2005 System Could Create Speaker Groups

To add a zone to a zone group

1. Touch the **Zones** button on your Controller.

*Select zone where desired
music is playing*



*Select zone to add to
group*



2. Highlight the zone or zone group you want to add a zone to, and touch **Link Zone**.

Dkt. 497-4 (Almeroth Reb. Rep.) p. 265 (citing Sonos 2005 User Guide); see also Dkt. 508-1 (Lambourne Decl.) paras 5-8

No Dispute Sonos 2005 System Saved Party Mode Group

3. Highlight the zone you want to add to the group, and touch **OK**. If you want to join all the zones in your house to this music queue, select **All Zones-Party Mode**. All of your ZonePlayers will then play the same music until you drop the zones from the zone group.



Kitchen and Garden make up a zone group

The music queue from the added zone is automatically replaced by the music queue from the zone or zone group it was linked to so that both zones play the same music

Dkt. 497-4 (Almeroth Reb. Rep.) p. 265 (citing Sonos 2005 User Guide); see also Dkt. 508-1 (Lambourne Decl.) paras 5-8

Sonos 2005 System: Inventor Admits “Party Mode” Involved Saving Zone Groups for Future Use and Can Be Adjusted to Add or Drop Speakers

SONOS



**Robert
Lambourne**
'885, '966 Patents
Inventor

6. As part of this ad-hoc grouping technology, Sonos's controller interface also included an “All Zones-Party Mode” option, which was hard-coded into Sonos Controllers (and the Desktop Controller software) and allowed a user to create an-hoc “zone group” comprising all of the ZonePlayers in the user's system with a single touch rather than requiring the user to select each of the ZonePlayers one at a time.

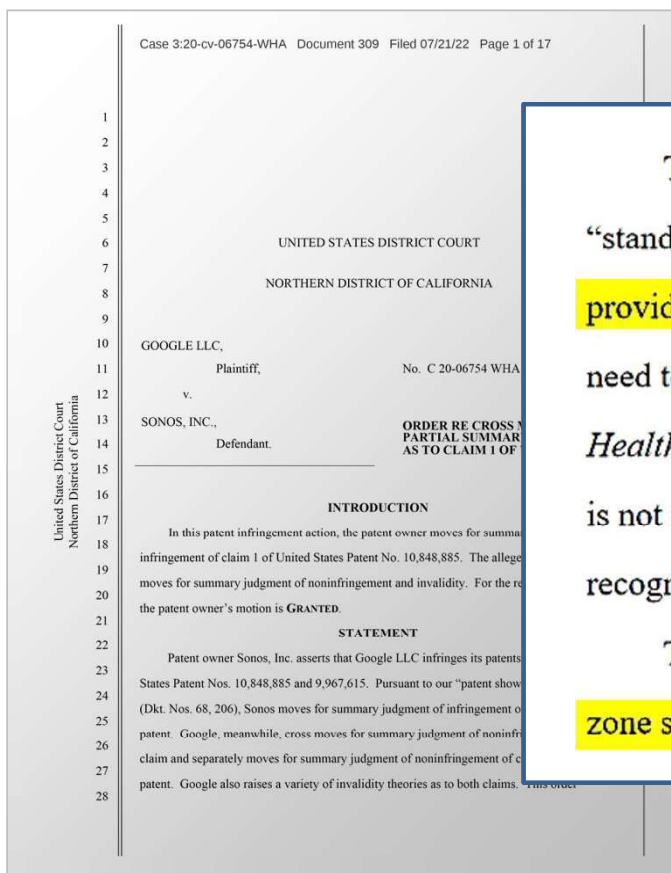
7. This ad-hoc grouping technology is described in the April 2005 User Guide for the Sonos Digital Music System (SONOS-SVG2-00227441 - SONOS-SVG2-00227554):

Zone groups

Two or more zones can be grouped together to form a zone group, which allows you to play the same music across zones. You can also link all the ZonePlayers in your house with one touch by selecting **All Zones-Party Mode**. You can add and drop zones from a zone group while your music is playing.

Dkt. 508-1 (R. Lambourne Decl. Iso Sonos Opp.)

The Court's Prior Order Determined Sufficient Level of Disclosure – If Patent Specification Was Sufficient to Teach POSITA, So Too Is Sonos Forums



True, as Google repeatedly points out, the specification never expressly refers to the term “standalone mode.” However, the specification does not have to use the term verbatim to provide sufficient disclosure. See *Ariad Pharms., Inc.*, 598 F.3d at 1352 (specification does not need to “recite the claimed invention *in haec verba*”); *Novartis Pharms. Corp. v. Accord Healthcare, Inc.*, 21 F.4th 1362, 1370 (Fed. Cir. 2022) (“literal description of every limitation” is not required). The disclosure need only “clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed.” *Ariad Pharms., Inc.*, 598 F.3d at 1351.

The disclosure does so here. Figure 6 illustrates the process of forming and “invok[ing]” a zone scene:

Dkt. 309 (Court’s Order on Showdown MSJs) at 16

The Court Found Fig. 6 Provides Written Description Support for the Alleged "Zone Scene" Technology

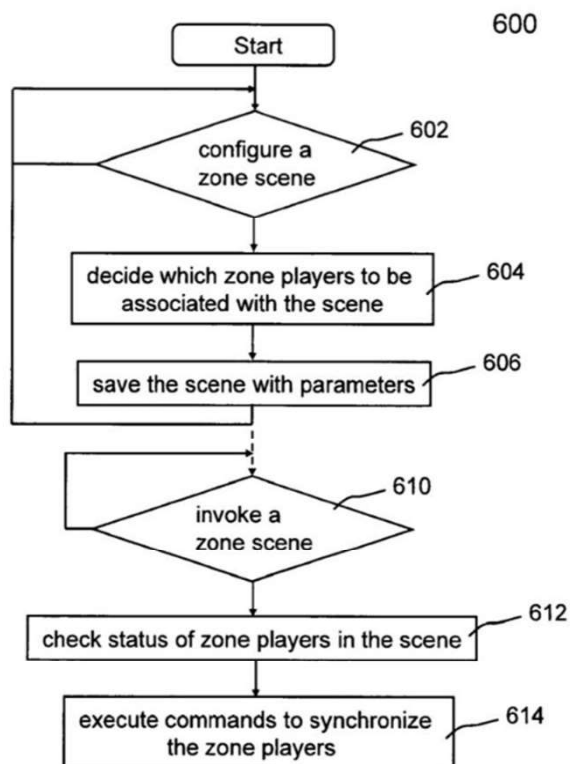


FIG. 6

The disclosure does so here. Figure 6 illustrates the process of forming and “invok[ing]” a zone scene:

...

The figure demonstrates that the process of forming a zone scene occurs in a specific order. The user “decide[s] which zone players to be associated with the scene” and then the scene is “[s]aved.” Once a scene is saved, it can then be “invoke[d]” later. The specification further

Dkt. 309 (Order on Google MSJ re Invalidity) at 16-17

Asserted Patents Teach That Zone Scenes Can Be Saved In Any Group Member Including a Controller

The specification clarifies that “[t]he list of zones in the user interface” shown in Figure 5B “includes ALL the zones in the system, *including the zones that are already grouped*” (*ibid.* (emphasis added)). Sonos additionally points to the specification’s disclosure that “*various scenes may be saved in any of the members in a group*” (*id.* at 2:56–59 (emphasis added)). These disclosures adequately convey that a zone player can be added to multiple zone scenes.

Dkt. 309 ('885 Showdown Order) at 15

It is assumed that all players associated with the scene are in good condition. At **614**, commands are executed with the parameters (e.g., pertaining to a playlist and volumes). In one embodiment, data including the parameters is transported from a member (e.g., a controller) to other members in the scene so that the players are caused to synchronize an operation configured in the scene. The operation may cause all players to play back a song in identical or different volumes or to play back a pre-stored file.

'885 Pat. at 10:66-11:7.

Sonos 2005 System: Created and Configured Speaker Groups

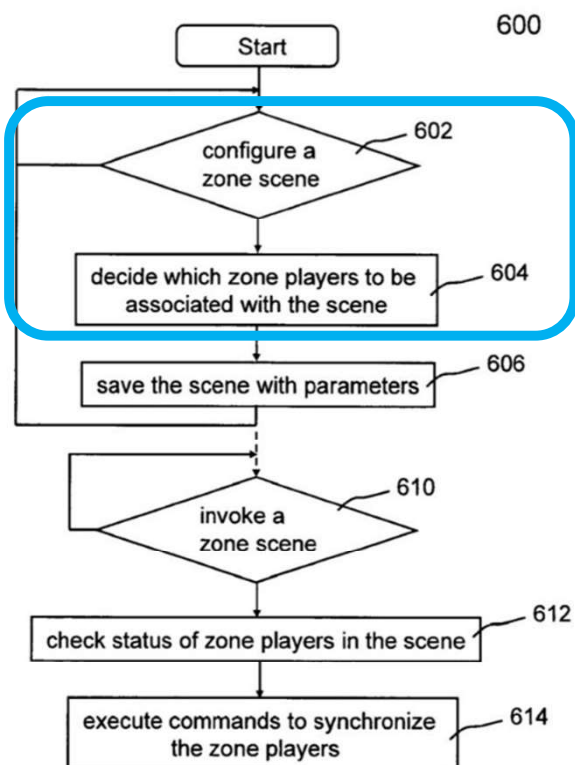
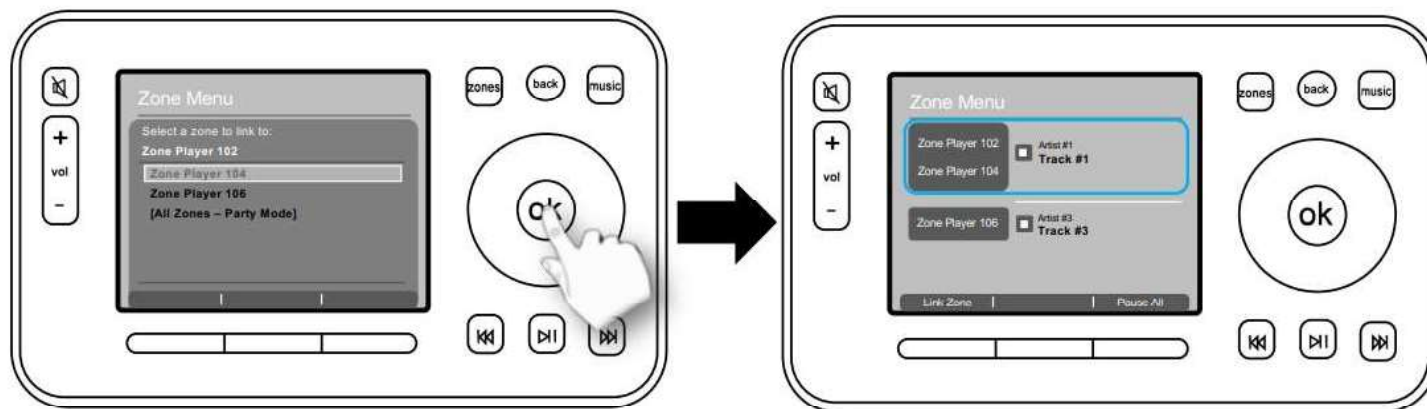


FIG. 6



Almeroth Supp. Reb. Dem. at 14, 17

There is no dispute that the Sonos 2005 system included the building blocks of the purported inventions claimed in the '885 and '966 patents. That system included "smart" speakers, speaker grouping with synchronous playback, controllers sending music and grouping-related instructions to speakers, and user interfaces providing grouping and playback functionality. Ex. 6 ¶¶ 265-66. Indeed, the parties agree that the Sonos 2005 system disclosed elements 1.0 through 1.4 of the '885 patent and elements 1.0 through 1.2 of the '966 patent. *E.g., id.* ¶ 241; Dkt. 468-7 at 41-43, 85-88 (validity contentions).

Dkt. 482-14 (Google MSJ) at 16

Sonos 2005 System: Indication Received by Speakers When Added to Group

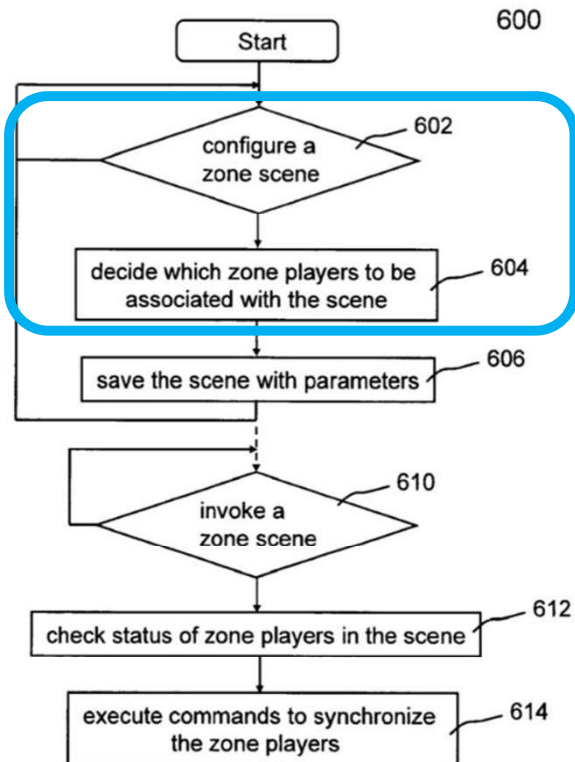
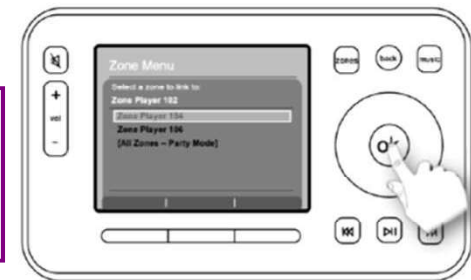
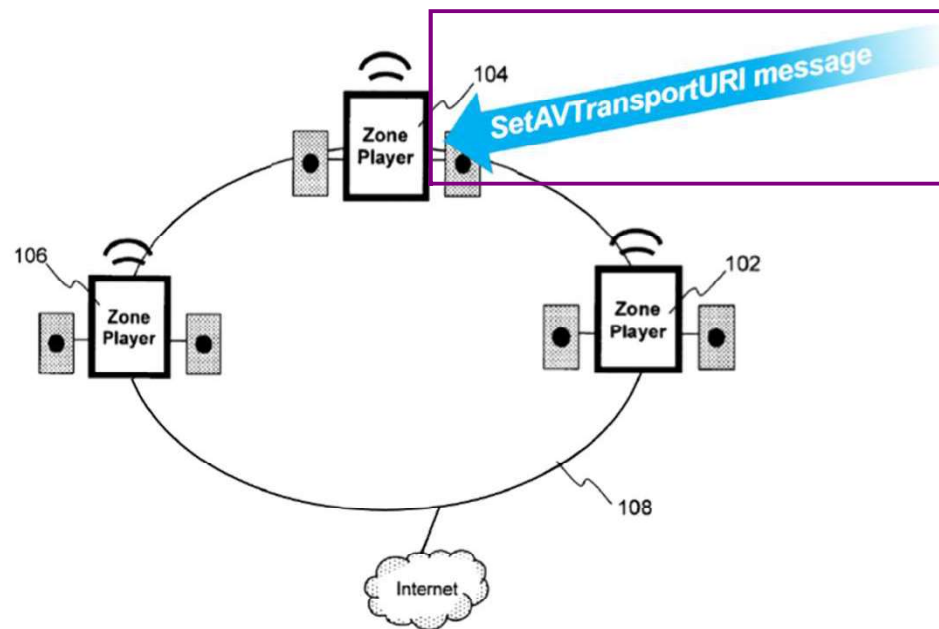


FIG. 6



First Zone Group
Zone Player 102 + Zone Player 104

Sonos 2005 System: Indication Received by Speakers When Added to Group

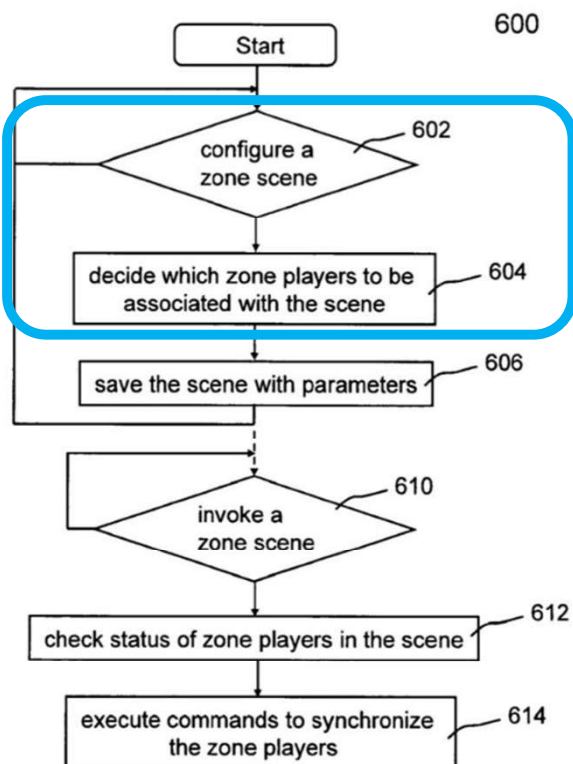


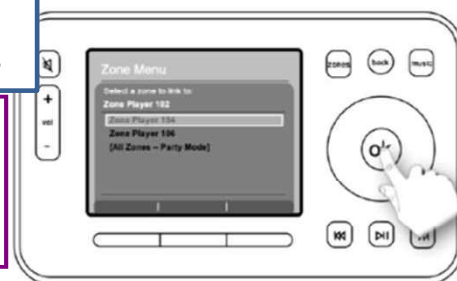
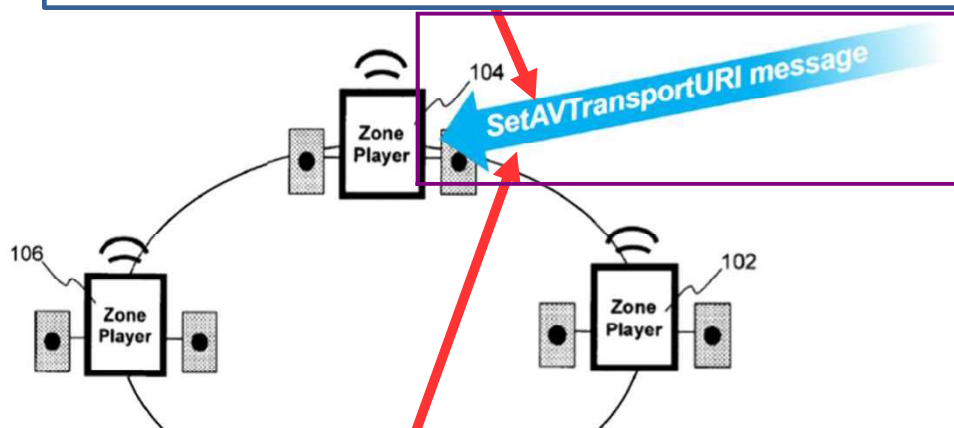
FIG. 6



Dr. Schonfeld

"The first Zone Player receives a SetAVTransportURI SOAP action with a Rincon group URI that identifies the group to join (jonee group)."

Mot. Ex. 8 (Schonfeld Rpt) at ¶¶ 353-55



**First Zone Group
Zone Player 102 + Zone Player 104**



Dr. Almeroth

"[T]hat SetAVTransportURI message was a direction for the ZonePlayer to enter into a new ad-hoc 'zone group,'"

Almeroth Jan. 13, 2023 Reb. Rpt. at ¶ 572

Almeroth Supp. Reb. Dem. at 13

Sonos 2005 System: Provided Multiple Groups for Synchronous Playback

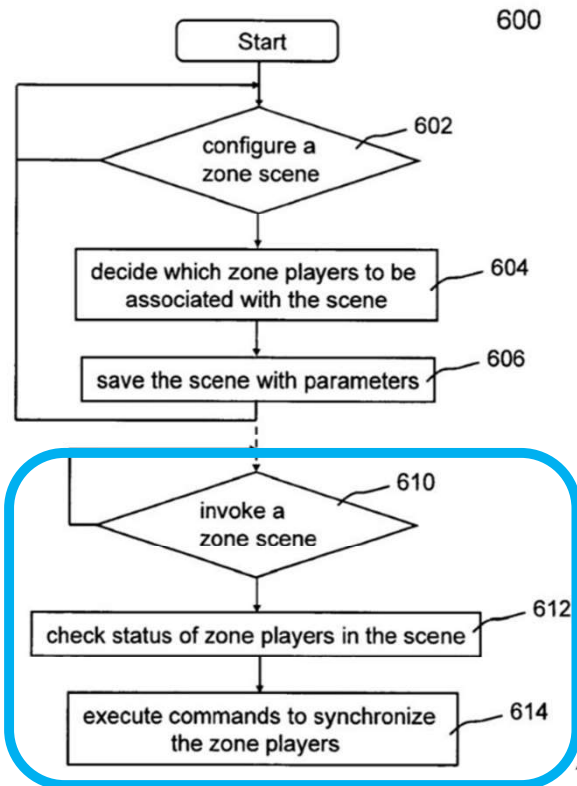
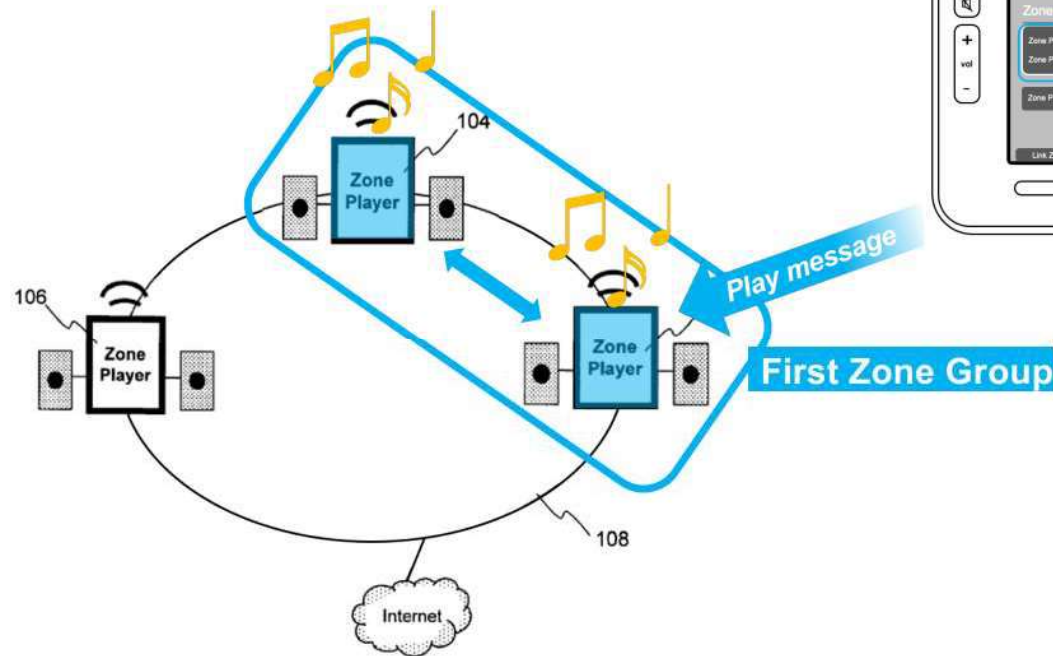


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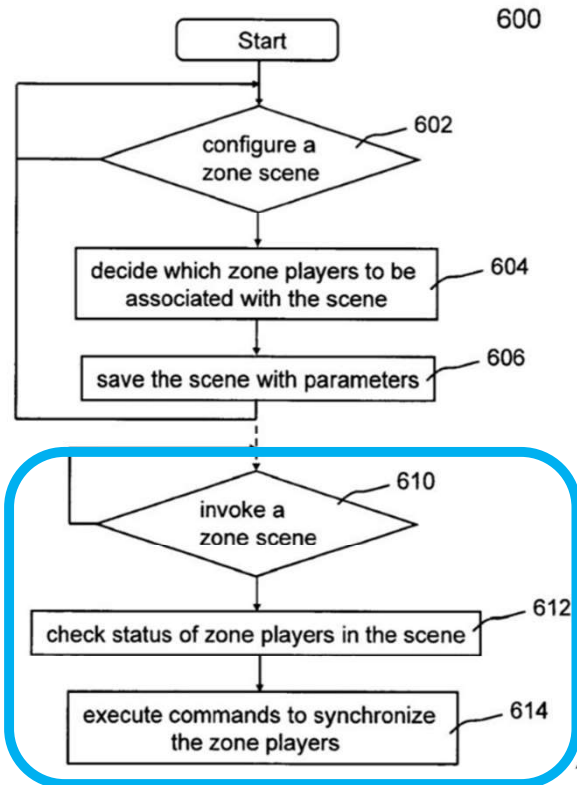
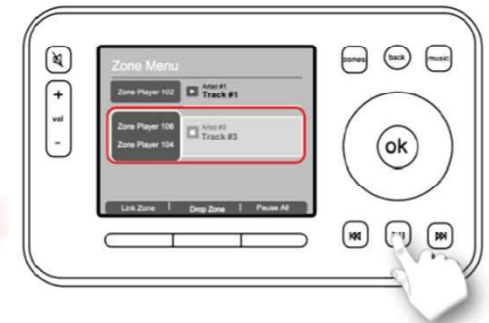
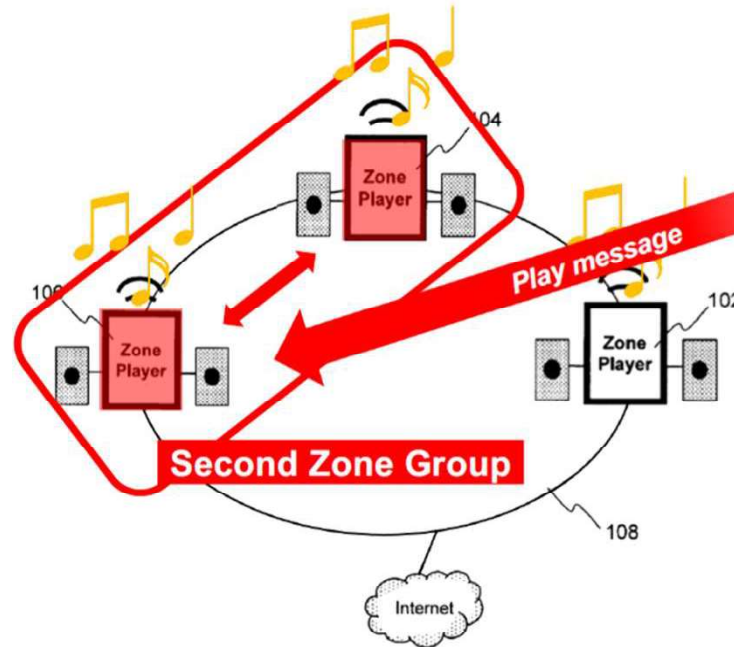


FIG. 6



Sonos Argues That Sonos 2005 System Did Not Save “Zone Scenes”

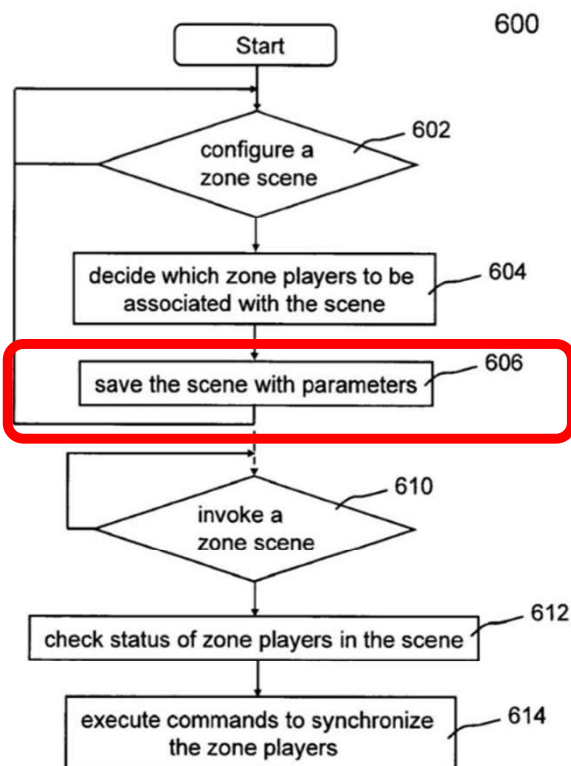


FIG. 6

“Morning”. The user may be given an interface to select four of the ten players to be associated with the scene. **At 606, the scene is saved.** The scene may be saved in any one of the members in the scene. In the example of FIG. 1, the scene is saved in one of the zone players and displayed on the controller 142. In operation, a set of data pertaining to the

’885 Pat. 10:41-44

together using one command. Using what is referred to herein as a theme or a zone scene, zones can be configured in a particular scene (e.g., morning, afternoon, or garden), where a predefined zone grouping and setting of attributes for the grouping are automatically effectuated.


’885 Pat. 8:47-52

The Court Has Determined Saving Named Speaker Groups is Sufficient to Disclose The Claimed Sequence of Operation

The question, then, is simply whether a user's ability to name speaker groups means that the user can group speakers according to a common theme. The answer is yes. While the specification is largely barren on this point, it expressly states that a user can make a zone scene by "mak[ing] a group of 3 zones *named after* 'Morning'" ('885 patent at 8:53–61 (emphasis added)). The specification does not suggest anything else is necessary. This conclusion also aligns with the basic purpose of the invention, which is to allow users to pre-save customized speaker groups and later "invoke" the named group on demand (*see, e.g., id.* at 9:15–20; fig. 6). The name serves to allow the user to remember the theme that binds a particular set of speakers.


Dkt. 309 (Order on Sonos MSJ re Infringement) at 8

Sonos Public Forums Disclosed Saving Named Speaker Groups for Future Use

 floradad Lyricist III • 20 replies 16 years ago

Great idea. A macro-like scripter would enable you to set groups of zones, associate playlists/radio, volumes, etc. You could do these as dynamic "presets" based on the Party Mode--which the spouse would love--like Entertaining, Romantic Dinner, Ambiance, etc.

This is a great like-to-have.

 Majik • 6113 replies 16 years ago
22 September 2005

Yes this sounds good.

Something like the ability to create a "zone group" which appears on the zone list, and perhaps the ability to hide/lock individual zones. . . .

Perhaps we need a "presets" page (perhaps using the soft-keys on the Zone screen) to allow a preset to be initiated. This preset could comprise a zone (or zone group), a volume profile, and a source or playlist, or it could be a macro sequence.

16 years ago • 61 replies • 15122 views

22 September 2005


 JeffT Trending Lyricist I • 20 replies

Just got the intro bundle, and I am impressed. I did a search and did not find this suggested, but I would save Zone links as favorites. With only 2 ZPs it is not a problem yet, but when I add more it maybe, I would like to setup say Morning mode for the units I want in the morning and a preset volume between the units. Another example I would have 2 party modes, Summer and Winter. The Summer mode would include the deck speakers and the Winter mode would not. Also it would be nice to have playlists or radio station associated with each mode. So when I get up I press Morning the DI Chill radio station plays.

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Dkt. 497-4 (Almeroth Reb. Rep.) pp. 164-165

Sonos Public Forums Provided Same (or Better) Level of Disclosure as Patents

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'885 Pat. 8:47-52

Sonos Public Forums Disclosed The Claimed Sequence of Operations By Disclosing “Preset” Zone Groups For Future Use

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Third, the ‘885 Patent discloses that a “zone scene” is a group of “zone players” that is “predefined” and “saved” for future use during a “setup” phase, but is not activated for synchronous playback at that time. *Supra* II.B.i; ‘885 Pat., 8:45-51, 10:4-19, 10:36-52, 11:12-19; D.I. 249-11, 1-2, 9-16; Ex. R, ¶55. Rather, the predefined group of “zone players” initially exists in an inactive state, which is what the ‘885 Patent explains when distinguishing a “zone scene” from an ad-hoc group that is automatically activated at the time it is formed rather than being predefined and saved for future use. *Id.* In this respect, the ‘885 Patent discloses that, unlike for an ad-hoc group, the act of adding “zone players” to a “zone scene” does not cause those “zone players” to become linked together for synchronous playback at that time. Ex. R, ¶53. This conveys to a POSITA that a “zone player” operating in “standalone mode” prior to being added to each new “zone scene” will continue to operate in “standalone mode” after being added to each new “zone scene.” *Id.*

Dkt. 273-4 (Sonos Reply iso Showdown MSJ) at 11-12

Dkt. 497-4 (Almeroth Reb. Rep.) pp. 164-165

Sonos Public Forums Disclosed Overlapping Zone Groups For Future Use – Not Disputed in Sonos Opposition Brief

16 years ago • 61 replies • 15122 views

22 September 2005



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Dkt. 497-4 (Almeroth Reb. Rep.) pp. 164-165

Sonos: "The Prior Art Does Not Disclose, Alone Or In Combination, The Claimed Zone Scene Technology"

First, the Sonos 2005 system did not have any “zone scene” technology. Mr. Lambourne (the inventor of the ’885 and ’966 Patents who was Sonos’s director of user experience design in 2005) and Nick Millington (who was Sonos’s director of software development in 2005) both confirm that Sonos’s 2005 system did not have any “zone scene” technology. Ex. A (Lambourne Decl.), ¶¶8-16; Ex. B (Millington Decl.), ¶¶8-10. And documents from the relevant timeframe likewise confirm that the Sonos 2005 system did not have any “zone scene” technology. For example, Sonos’s 2005 User Guide makes no reference to any “zone scene” technology. Ex. K

Dkt. 509-2 (Sonos Opp. to MSJ) at 12

Inventor Admitted “Party Mode” in Sonos 2005 System Is a “Zone Scene”

SONOS



Robert
Lambourne
'885, '966 Patents
Inventor

The Zone Scene feature allows the user to arrange the zones into groups using one single command. This is similar to the current Party Mode setting that is available. However, the Zone

Dkt. 508-18 (Ex. R to Sonos Opp. to MSJ)

Q. The Party Mode setting is a Zone Scene; right?

A. Yeah. I think I describe a Party Mode as an example of a Zone Scene that can be set up, created.

R. Lambourne Dep. Tr. 63:8-13, 6/6/2022 (objection omitted)

A POSITA Would Look to Sonos Forums to Modify the Sonos 2005 System

SONOS



**Robert
Lambourne**
'885, '966 Patents
Inventor

- Q. How did the feedback that you were getting through the Sonos forums affect your work?
- A. I think -- I mean, it would depend what the comments were, but people might describe situations in which they were not happy, which we might try and solve for, or for situations which they were happy which we know that that was a good thing. Generally feedback.

R. Lambourne Dep. Tr. 143:7-144:11, 6/6/2022

Sonos Forums Provide Express Motivation to Modify Sonos 2005 System

Undisputed:

- Sonos Forums were used to offer feature suggestions for Sonos products
- Sonos product engineers reviewed those forums to understand users' concerns regarding the products

Unsupported Ipse Dixit:

- Ability to save speaker groups would have required “tradeoffs” resulting in “unappetizing combination”
- Saving speaker groups would result in “decreased efficiency”

Sonos Forums Provide Express Motivation to Modify Sonos 2005 System

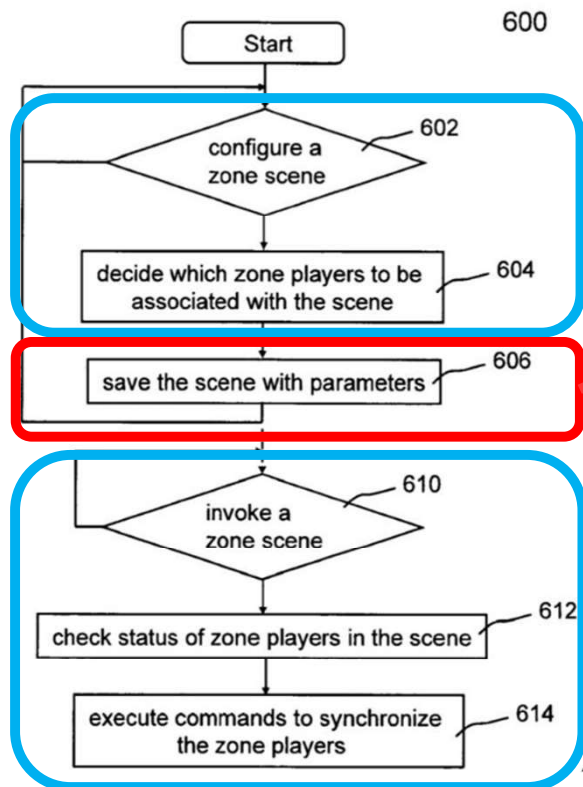
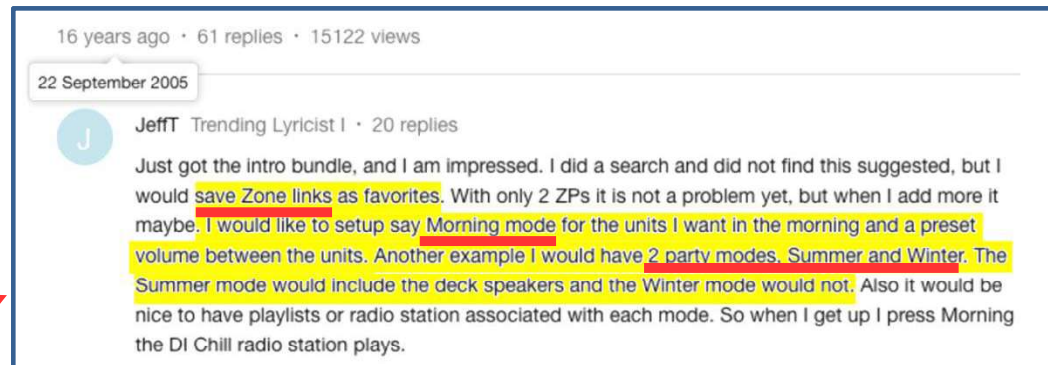
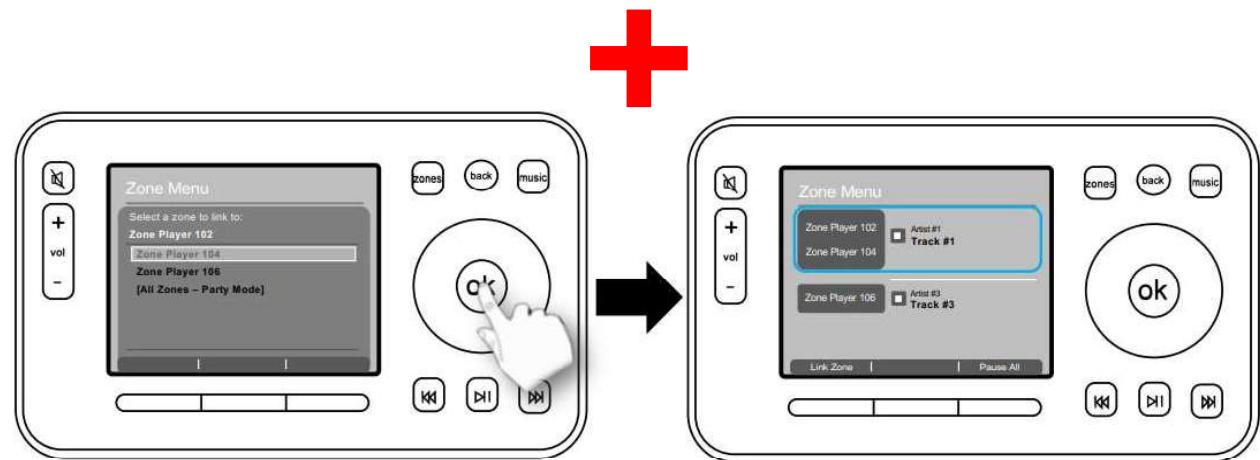


FIG. 6



Dkt. 497-4 (Almeroth Reb. Rep.) pp. 164-165



Almeroth Supp. Reb. Dem. at 14, 17

Sonos Forums Provide Express Motivation to Modify Sonos 2005 System, and Did Not Teach Away From the Modification



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Dkt. 497-4 (Almeroth Reb. Rep.) pp. 164-165

Sonos Forums Provide Express Motivation to Modify Sonos 2005 System



In considering motivation in an obviousness analysis, we ask whether a person of ordinary skill in the art, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to make the combination recited in the claims.


We see no error in the district court's conclusion that *a motivation to combine the two references exists as a matter of law*.

Optivus Technology, Inc. v. Ion Beam Applications S.A., 469 F.3d 978, 989-91 (Fed. Cir. 2006)
(citations and quotation marks omitted)

Secondary Considerations: Sonos Forums Taught the Feature Being Praised


conclusion.” *Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1355 (Fed. Cir. 2013). Sonos’s zone scene technology received substantial praise in the industry. For example, CNN touted Sonos’s zone scene technology as “the best feature” of the Sonos system because it provides “the ability to save a group of speakers as a preset.” Ex. S (SONOS-SVG2-00062361) at 363. At least a dozen other publications highlighted Sonos’s zone scenes technology *specifically* with similar praise. *See, e.g.*, Ex. K (Almeroth Reb.), ¶¶1613-1640. This evidence confirms that the asserted

Dkt. 509-2 (Sonos Opp.) at 19

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Alleged Lack of Enablement of Sonos Forums Is Irrelevant to Google's Obviousness Arguments



ABT's suggestion that Cornelius and Nakatsuno are non-enabled is misplaced, since even “[a] *non-enabling reference may qualify as prior art for the purpose of determining obviousness,*” and even “an inoperative device ... is prior art for all that it teaches.”


ABT Sys., LLC v. Emerson Elec. Co., 797 F.3d 1350, 1360 (Fed. Cir. 2015) (emphasis added) (citations omitted)

The standard for what constitutes proper enablement of a prior art reference for purposes of anticipation under section 102, however, differs from the enablement standard under section 112. In *In re Hafner*, 56 C.C.P.A. 1424, 410 F.2d 1403 (Cust. & Pat. App. 1969), the court stated that “a disclosure lacking a teaching of how to use a fully disclosed compound for a specific, substantial utility or of how to use for such purpose a compound produced by a fully disclosed process is, under the present state of the law, *entirely adequate to anticipate a claim to either the product or the process and, at the same time, entirely inadequate to support the allowance of such a claim.*” The reason is that section 112 “provides that the specification must enable one skilled in the art to ‘use’ the invention whereas [section] 102 makes no such requirement as to an anticipatory disclosure.”

Rasmusson v. SmithKline Beecham Corp., 413 F.3d 1318, 1325 (Fed. Cir. 2005) (citations omitted)

2. The “Zone Scenes” Patents (‘885 and ‘966) Are Not Infringed Based on Google’s Design Around

The “Standalone Mode” Requirement


 US01084885B2

(12) **United States Patent**
Lambourne

(10) Patent No.: **US 10,848,885 B2**
(45) Date of Patent: ***Nov. 24, 2020**

(54) **ZONE SCENE MANAGEMENT**

(71) Applicant: **SONOS, INC.**, Santa Barbara, CA (US)

(72) Inventor: **Robert A. Lambourne**, Santa Barbara, CA (US)

(73) Assignee: **Sonos, Inc.**, Santa Barbara, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days. This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16/983,561**

(22) Filed: **Apr. 12, 2019**

(65) **Prior Publication Data**
US 2019/0239008 A1 Aug. 1, 2019

Related U.S. Application Data

(63) Continuation of application No. 15/130,919, filed on Apr. 15, 2016, which is a continuation of application (Continued)

(51) **Int. Cl.**
G06F 17/00 (2019.01)
H04R 27/00 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC **H04R 27/00** (2013.01); **G05H 15/02** (2013.01); **G06F 3/0482** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC 1104R 27/00; 1104R 5/12; 1104R 2227/005; 1104R 2430/01; G05H 15/02;
(Continued)

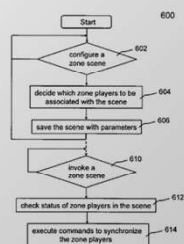
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(Continued)

(57) **ABSTRACT**
An example playback device in a first zone of a media playback system receives a first indication that the first zone has been added to a first zone scene including a first preconfigured grouping of zones including the first zone and a second zone. The playback device receives a second indication that the first zone has been added to a second zone scene including a second preconfigured grouping of zones including the first zone and a third zone. After a given one of the first and second zone scenes has been selected for invocation, the playback device receives an instruction to operate in accordance with the given zone scene, and based on the instruction, begins operating in accordance with the given zone scene such that the playback device is configured to play back audio in synchrony with one or more other playback devices in the media playback system.

20 Claims, 11 Drawing Sheets



1. A first zone player comprising:
a network interface that is configured to communicatively couple the first zone player to at least one data network;
one or more processors;
a non-transitory computer-readable medium; and
program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

- (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and
- (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

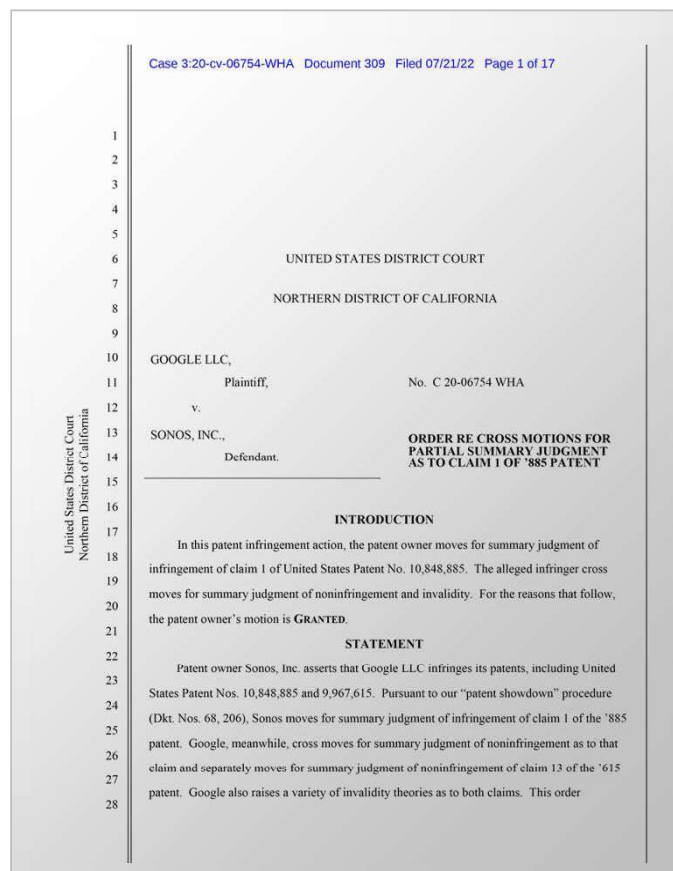
'885 Patent, Claim 1

The “Standalone Mode” Requirement

The Court Explained the Meaning of “Standalone Mode” in the Showdown Order

Second, Google contends that the specification does not provide support for the zone player “continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation” and “transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players” (*see* limitations 1.6; 1.8). In plain English, these limitations explain that an individual smart speaker that has been added to a speaker group will continue to operate individually — *i.e.*, in “standalone mode” — until the speaker group of which it is a member is activated by the user, at which point the individual speaker will transition to being controlled as part of the group. Google asserts that the specification never describes this claimed sequence of operations.

Dkt. 309 ('885 Showdown Order) at 15



Pre-Redesign: Standalone Mode Player Added to New Group

Google Player 1
(GP1)



GP1 remained configured for individual playback



Post-Redesign: Standalone Mode Player Added to New Group

Google Player 1
(GP1)

 YouTube Music



Inactive

GP1 transitions to inactive mode



Redesign Changes Behavior When Standalone Mode Speaker Added to Group

```
base::flat_set<std::string> group_uids({virtual_group_uid_});
for (const auto& g : local_groups) {
  group_uids.insert(g.uuid);
  auto it = groups_.find(g.uuid);
  if (it == groups_.end()) {
    StopCurrentApp();
    AddGroup(g);
  } else if (it->second->Reconfigure(g)) {
    SaveGroupConfig(g);
  } else {
    continue;
  }
}
groups_changed = true;
SC-GOOG-SONOSNDCA-001637-38.
```

Inactive

GP1 transitions to inactive mode



Inactive Speakers Are Not Configured For Individual Playback

Google



Ken MacKay
Google Engineer

3. When Google's speaker products are powered on, but before they receive input from a user, those products are inactive in that they have not received signaling or commands causing those products to prepare to play or output media individually or as a member of a speaker group.

Dkt. 538-7 (MacKay Decl.)

Inactive Speakers May Be Configured For Individual Playback Only By Launching Applications

Google



Ken MacKay
Google Engineer

4. A user may command a Google speaker product to prepare to play or output media individually or as a member of a speaker group. For example, a user may use a Google application, such as the YouTube Music application, to Cast to a Google speaker product. As part of the Casting process, the speaker will no longer be in an inactive state and will instead prepare to play back or output media individually or as a member of a speaker group, including by launching an application on the Google speaker product that assists with play back or output of media—for example, the YouTube Music application.

Dkt. 538-7 (MacKay Decl.)

Speaker Configured For Individual Playback Returns to Inactive State By Stopping Launched Application

Google

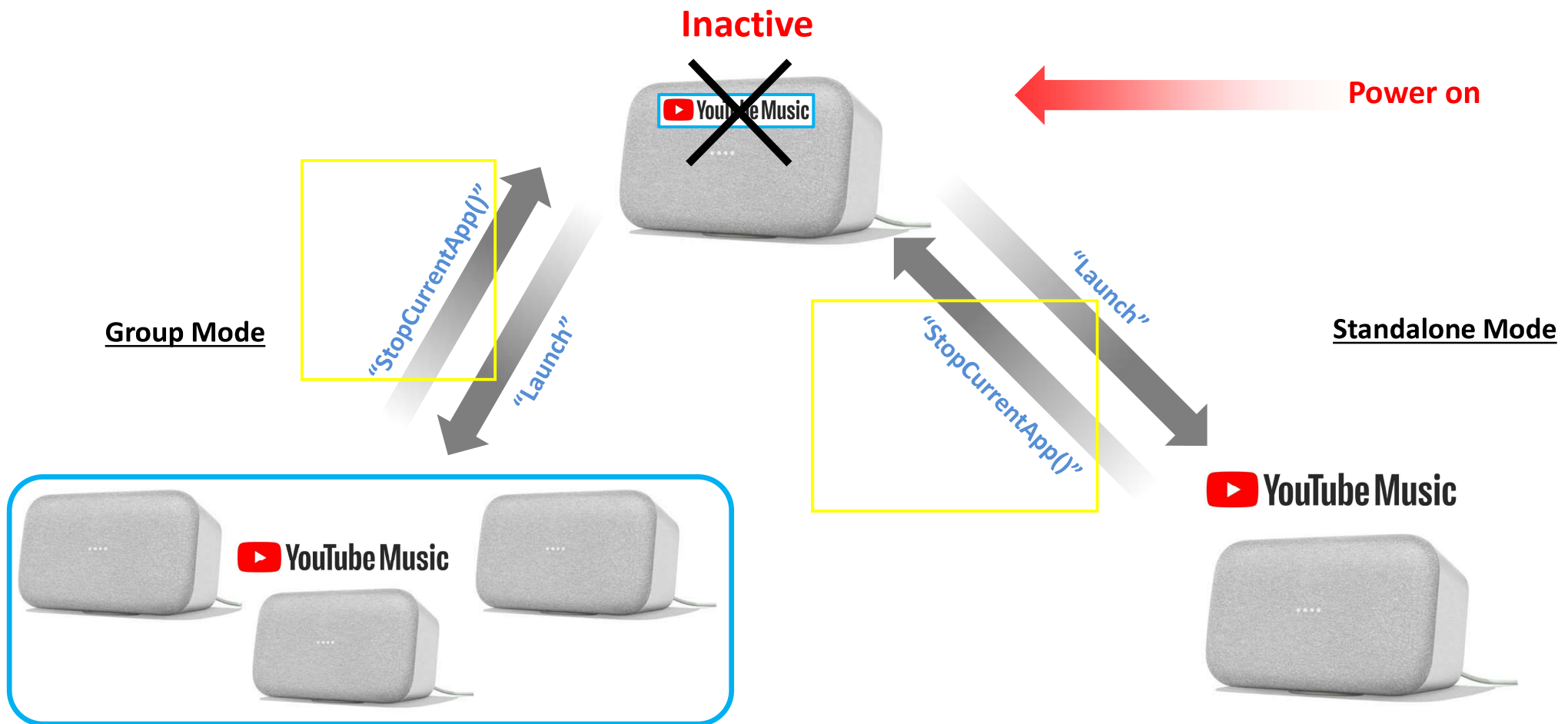


Ken MacKay
Google Engineer

5. The Google speaker product may also return to an inactive state if the launched application, for example YouTube Music, running on the Google speaker product is stopped. When the launched application is stopped, the speaker will become inactive. The speaker would need to receive a command in order to cause the speaker to operate by playing back media individually or as a group member.

Dkt. 538-7 (MacKay Decl.)

Redesign Does Not Infringe Because Speakers Are Inactive When Added to a Group



Sonos's Expert Agrees That Players Are Inactive Until Launch Command



**Dr. Kevin
Almeroth**

415. The evidence I have reviewed also confirms that an Accused Google Player operating in a standalone mode will continue to operate in that standalone mode unless and until a speaker group that includes the Accused Google Player is created, saved, and launched, at which point the Accused Google Player will transition from the standalone mode to a grouped mode. See, e.g., GOOG-SONOSWDTX-00048962-66 at 64-65 (explaining that a Accused Google Player updates its “prefs file” when it receives a “join_group” message but does not begin operating as part of that speaker group unless and until the speaker group is selected for launch); GOOG-SONOSWDTX-00040384-96 at 84-89 (describing the separate processes for “[c]reating/configuring a group” and then subsequently “[c]asting to a group” that has previously been saved when a “user selects the group as the cast target”); GOOG-SONOSWDTX-00048792-838 at 802 (explaining that each Cast receiver device “can be a member of more than one group” and that “[e]ven if a device is part of a group(s) it will still be available for casting as a standalone device”); GOOG-SONOSNDCA-00056732-77 at 56-62 (showing that a Cast receiver does not begin operating as part of a previously-saved speaker group until the speaker group is selected for

Sonos's Expert Agrees That Players Are Inactive Until Launch Command



**Dr. Kevin
Almeroth**

launch at a Cast sender); 5/10/2022 K. MacKay Dep. Tr. at 116:10-13, 117:4-15 (explaining that “a newly created speaker group is not automatically launched at the time that it is created” but rather “exists in an unlaunched state” (or “inactive” state)), 113:22-114:18 (explaining that “whether or not a device is a member of a group or multiple groups, you can still cast to it as a single device” (or “standalone device”)), 191:22-195:6 (confirming that when a new speaker group of Accused Google Players is created, “the Cast state of [a] player being included in the new group will not change” regardless of whether or not the player is actively playing music individually or as part of a group), 198:1-7 (confirming that if a Accused Google Player “has a single device Cast session established” prior to the creation of a speaker group that includes that Accused Google Player, “the single device Cast session will remain after the group is created”); Section XI (testing showing that the act of creating and saving a new speaker group does not change the operating mode of the Accused Google Players that are added to the speaker group, and that a Accused Google Player operating in a “standalone mode” will continue to operate in that mode and will not begin operating in accordance with the speaker group until it is selected for launch).

Google MSJ Reply Ex. 3 (2022-11-30 Almeroth Op. Rep.) p. 193

Dr. Almeroth Labels All Speakers Not In a Group As Standalone Speakers Without Any Evidence



**Dr. Kevin
Almeroth**

126. The Cast technology incorporated into the Accused Google Players enables each Accused Google Player to operate in one of two mutually exclusive modes at any given time: (1) a mode in which the Accused Google Player is configured to play back audio individually (referred to internally by Google as a “standalone” or “non-group” mode) or (2) a mode in which the Accused Google Player is configured to play back media in synchrony with one or more other Accused Google Players as part of a group (referred to internally by Google as a “multizone” or “multiroom” grouped mode). *See, e.g.*, GOOG-SONOSWDTX-00048731 at 47 (referring to a “non-group” mode as a “standalone” mode); GOOG-SONOSWDTX-00005793 at 93 (describing how to listen to music on an Accused Google Player that is operating in standalone mode); GOOG-SONOSWDTX-00007068 at 68 (“Group any combination of Google Nest or Google Home speakers and displays and Chromecast devices together for synchronous music throughout the home.”); GOOG-SONOSWDTX-00040384 at 85 (document titled “Multizone Audio Design” stating “[t]he primary goal of multiroom audio is to play out the audio in sync across all the devices in a group”); GOOG-SONOSNDCA-00056732-77.

Dkt. 483-4 pp. 46

Uncorroborated Expert Testimony Does Not Create Material Dispute of Fact



It is well settled that an expert's unsupported conclusion on the ultimate issue of infringement is insufficient to raise a genuine issue of material fact, and that a party may not avoid that rule simply by framing the expert's conclusion as an assertion that a particular critical claim limitation is found in the accused device.

Dynacore Holdings Corp. v. US Philips Corp., 363 F.3d 1263, 1278 (Fed. Cir. 2004)

Invalidity Of The '033 Patent (All Asserted Claims)



Sonos, Inc. v. Google LLC.

Case: 6:20-cv-881

Judicial Estoppel Does Not Apply

Judicial Estoppel Does Not Apply



To determine if estoppel applies, courts apply a three-part test: whether (1) a party's later position is "clearly inconsistent" with its earlier position; (2) the party "succeeded in persuading a court to accept" the earlier position; and (3) the party would "derive an unfair advantage or impose an unfair detriment" on the other side if not estopped.

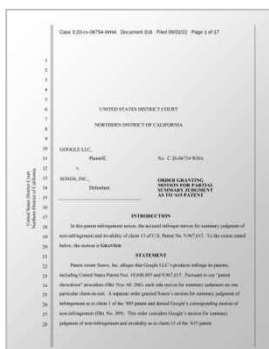
New Hampshire v. Maine, 532 U.S. 742, 750-51 (2001)

"[J]udicial estoppel is reserved for more egregious conduct than just threshold inconsistency."

Balfour Beatty Infrastructure, Inc. v. PB&A, Inc., 2017 WL 1739101, at *5 (N.D. Cal. May 4, 2017)
(internal quotations and citations omitted)

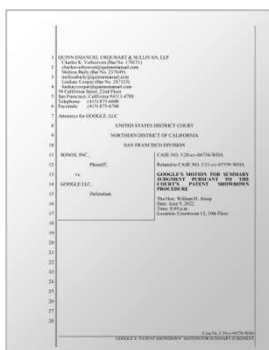
Google's Arguments Are Not "Clearly Inconsistent"

- YTR's party mode and server-recommended videos were not at issue during the showdown
- Showdown involved playback of user-created queues in YTR V1 (released on Nov. 9, 2010)

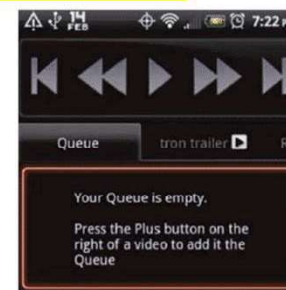


and/or source code" that is dated July 12, 2010. The version of the YouTube Remote system that Google asserts as anticipating prior art is dated November 9, 2010. To link the API

Dkt. 316 (Showdown Order) at 14



Google released the YouTube Remote ("YTR") application on November 9, 2010, over a year before the '615 Patent's priority date. Ex. 9 (Bobohalma Decl.), ¶3.6. Users of the YTR prior art could queue up YouTube videos on their phone by adding them to a playback "queue," as can be seen in the image of the YTR prior art on the right. Ex. 1 (Bhattacharjee Decl.), ¶129. A user could

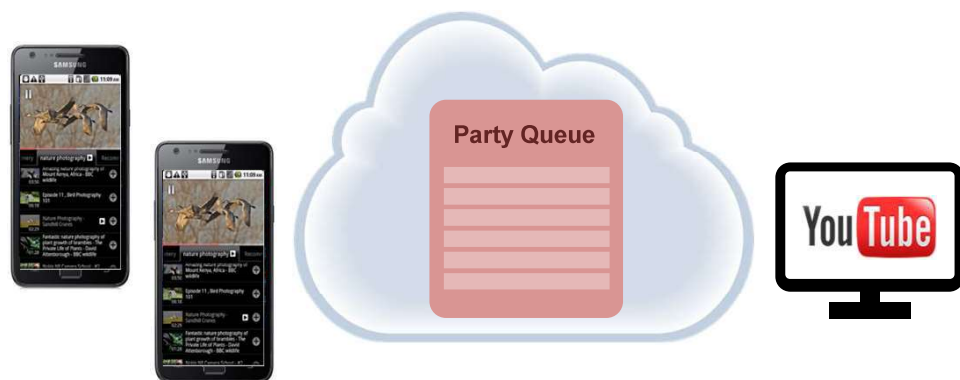


Dkt. 210-15 (Google's Showdown MSJ) at 16

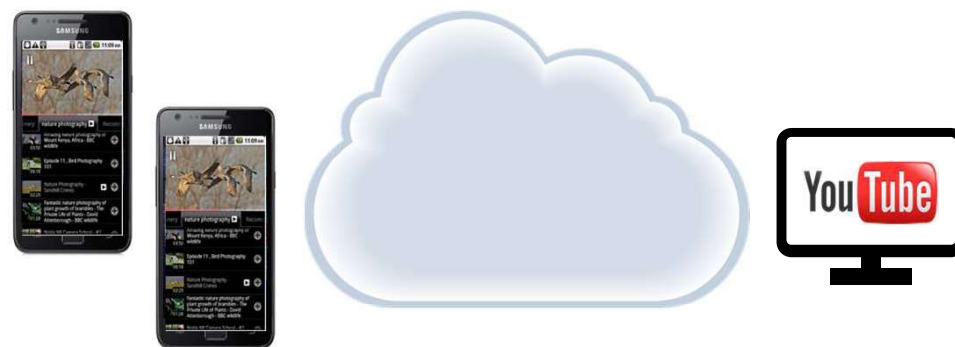
Google's "Party Mode" Argument Is Not "Clearly Inconsistent"

- YTRv2 has a party mode that uses a "remote playback queue," whereas YTR V1 did not

YTRv2 (Party Mode)



YTRv1 (No Party Mode)



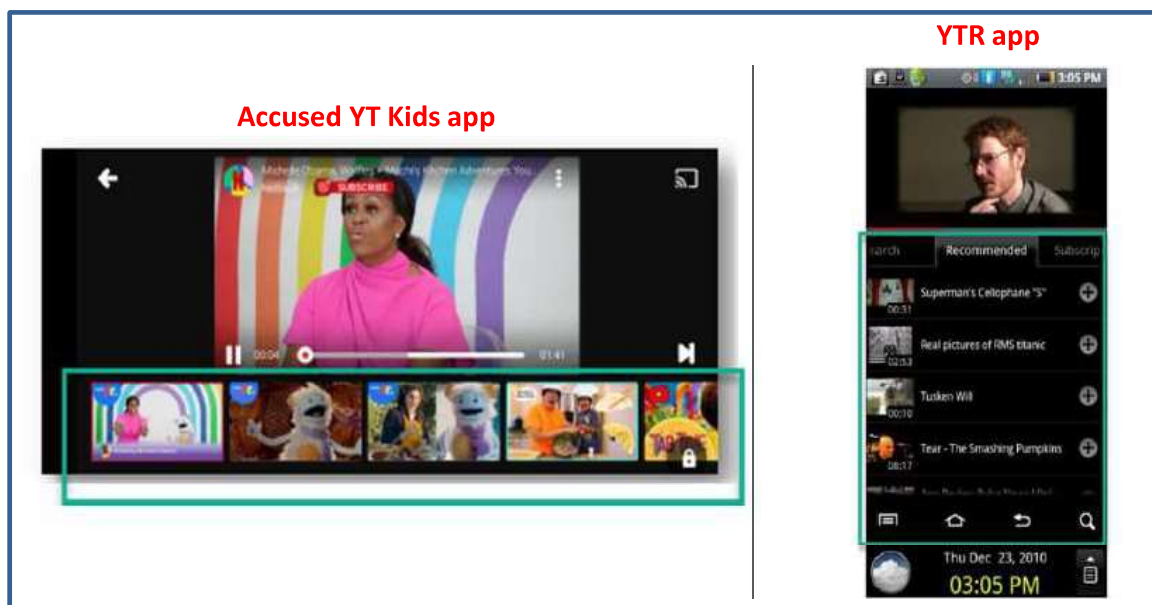
Google's Service-recommended Video Argument Is Not "Clearly Inconsistent"

- The Court agreed with Sonos that a "playback queue" can include service-recommended videos

Third, Sonos asserts that the content in the queue need not be selected directly by a user. Google's position, by contrast, is that a user must directly populate and manage the queue (CC Opp. 11). Google's argument does not persuade. True, the specification discusses scenarios

Dkt. 316 (Showdown Order) at 7-8

- For infringement, Sonos accuses service-recommended videos of being a "remote playback queue":



Dkt. 482-14 (MSJ) at 10

Google Did Not State That The YTR “Used Only A ‘Local Playback Queue’”

- Both local queue mode and remote queue mode existed in prior art YTR
- Local queue eliminated in 2014, such that accused YT apps have only remote queue when casting

1 QUINN EMANUEL URQUHART & SULLIVAN, LLP 2 Charles K. Verhoeven (Bar No. 170151) 3 charles.verhoeven@quinnemanuel.com 4 Melissa Bailey (Bar No. 237649) 5 melissabailey@quinnemanuel.com 6 Lindsay Cooper (Bar No. 287125) 7 lindsaycooper@quinnemanuel.com 8 50 California Street, 22nd Floor 9 San Francisco, California 94111-4788 10 Telephone: (415) 875-6600 11 Facsimile: (415) 875-6700 12 Attorneys for GOOGLE, LLC	UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA SAN FRANCISCO DIVISION	11 SONOS, INC., 12 Plaintiff, 13 vs. 14 GOOGLE LLC, 15 Defendant.	CASE NO. 3:20-cv-06754-WHA Related to CASE NO. 3:21-cv-07559-WHA GOOGLE'S MOTION FOR SUMMARY JUDGMENT PURSUANT TO THE COURT'S PATENT SHOWDOWN PROCEDURE The Hon. William H. Alsup Date: June 9, 2022 Time: 8:00 a.m. Location: Courtroom 12, 19th Floor
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Case No. 3:20-cv-06754-WHA
GOOGLE'S "PATENT SHOWDOWN" MOTION FOR SUMMARY JUDGMENT

Dkt. No. 210-15 (Showdown MSJ)

The YouTube Remote allowed a user to queue up music on his or her mobile device, then transfer playback of that queue to one or more televisions. Notably, the YouTube Remote prior art product is a direct ancestor of the YouTube product Sonos accuses of infringement, and therefore it aligns with Sonos's infringement theories in the same ways. The key difference is that where the accused YouTube applications use Version 3 of the Mobile Device eXperience (MDx) protocol that implements a cloud queue, the prior art YouTube Remote used Version 1 that implements a local queue. Thus, Google's current (remote queue) products cannot infringe the patent, but its prior art (local queue) products invalidate that same patent.

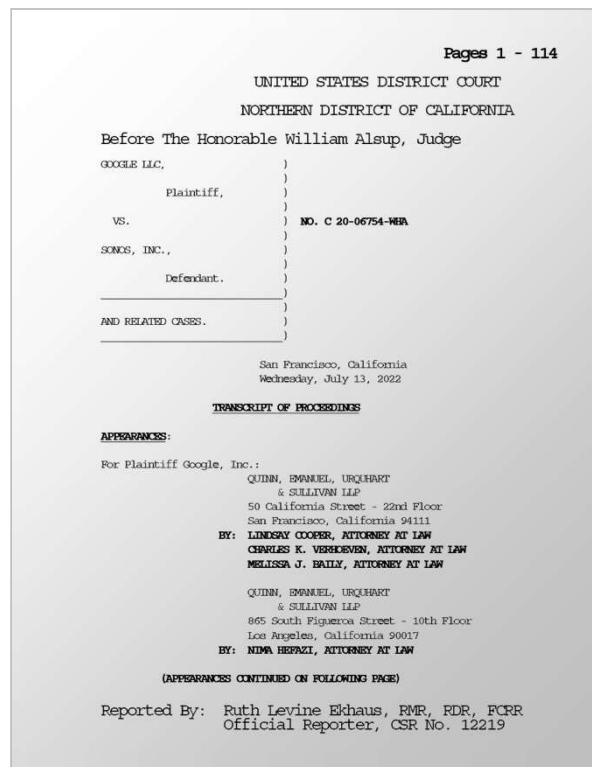
Dkt. No. 210-15 (Showdown MSJ) at 2

Sonos accuses Google's MDx protocol as providing the local playback queue. The MDx protocol does manage playback on a device in YouTube; however, only older versions of that protocol stored the playback queue on the playback device. When Google transitioned to MDx Version 3, it eliminated the playback queue on the playback device in favor of a cloud queue in the maintaining it on the MDx server. See Ex. 2 at GOOG-SONOSWDTX-00041748 ("the queue is now maintained on the **MDx server and not the TV**"); Ex. 3 at GOOG-SONOSWDTX-00039988

Dkt. No. 210-15 (Showdown MSJ) at 5

Google Did Not State That A Local And Remote Queue Are “Mutually Exclusive”

- Google explained that a speaker asking “to know the next item in the [cloud] queue” does not show that there is a local playback queue



7-13-2022 Showdown Hearing Tr.

THE COURT: All right. So, Mr. Verhoeven, the argument against you here is that -- there are two queues: There is one in the Cloud, and there is another one on the speaker. The local playback queue is on the speaker, and all it needs to know is what is the next one.

And so that's good enough for its purposes and just calls the next one.

MR. VERHOEVEN: You know, this is --

THE COURT: What do you say to that?

MR. VERHOEVEN: I say that that's unpersuasive in the extreme.

THE COURT: Okay.

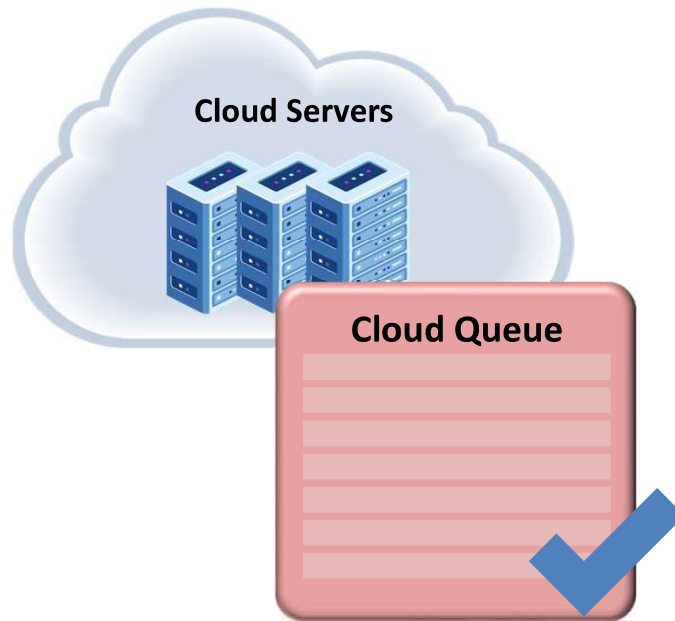
MR. VERHOEVEN: We're talking about a queue. Somebody has to own that queue. Somebody has to maintain that queue. Somebody has to be in charge of that queue. Who is it?

It's the Cloud. That's why it's called the Cloud queue.

The queue is maintained in the Cloud. If you want to know -- if you're the speaker and you want to know the next item in the queue, you ask the Cloud because the Cloud maintains the queue.

Accused YouTube Applications Did Not Use A Local Queue

**Playlist Is Stored in a
Cloud Queue**



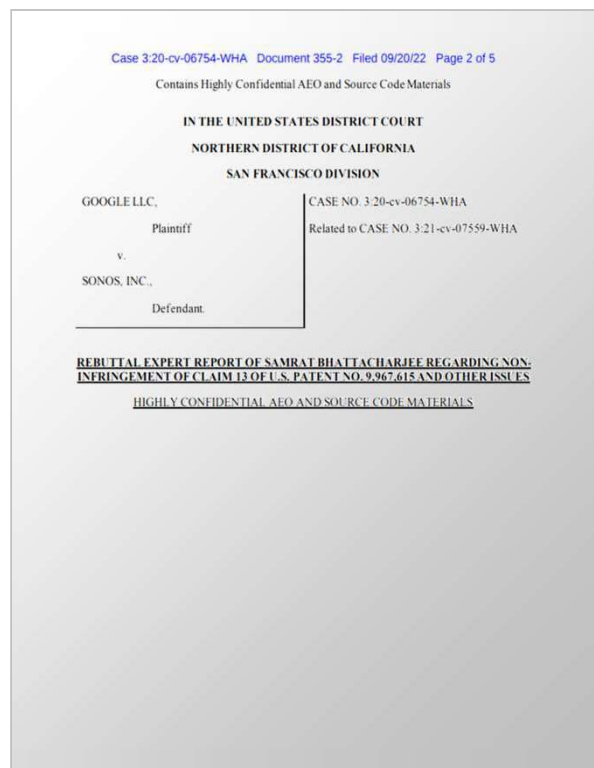
**Receiver Fetches Identity of the
Next Item in the Cloud Queue**



**No local
playback queue**

Google Did Not State That A Local And Remote Queue Are “Mutually Exclusive”

- Google expressly told Sonos that a system can have both a local and remote playback queue:



319. Dr. Schmidt contends that the “core” of my non-infringement opinion “is the faulty premise that a ‘local playback queue’ and a ‘Cloud Queue’ are mutually exclusive.” Schmidt Rpt., ¶¶276-287. **This is a misunderstanding or misrepresentation of my position** regarding the differences between a “cloud queue” and a “local playback queue.” Whether or not some hypothetical system may store the playback queue in a cloud queue and also store a copy of that playback queue locally on the receiver device is irrelevant because YouTube does not store the playback queue at both locations. At most, Dr. Schmidt has shown that in playing back a cloud queue the receiver device may store identifiers for items in the cloud playback queue (e.g., the current and next cloud queue items), not the local playback queue.

320. Dr. Schmidt states: “I see nothing in claim 13 that precludes the possibility that some other queue (e.g., a cloud queue) might exist in the system beyond the claimed ‘local playback queue.’” Schmidt Rpt., ¶277. **I have not precluded such an architecture.** However, in attempting to characterize items from a cloud queue as a “local playback queue,” Dr. Schmidt fails to appreciate and give meaning to the difference between a “remote” and a “local” playback queue. **A system might store the playback queue both at the local playback device and remotely. This is not the case with the accused products.**

Dkt. 536-3 (Google’s MSJ Reply) at 2 (citing Batta. Reb. Showdown Rpt.) ¶¶ 319-20

The Court Did Not Adopt Any Purported Inconsistent Position

- The Court addressed only YTRv1—it did not conclude YTRv2 uses “only” a local queue:

and/or source code” that is dated July 12, 2010. The version of the YouTube Remote system that Google asserts as anticipating prior art is dated November 9, 2010. To link the API

Dkt. 316 (Showdown Order) at 14



- The Court concluded the accused YTR applications do not use a “local playback queue,” not that a local and remote queue are mutually exclusive:

Sonos has accordingly failed to raise a genuine dispute that Google’s products employ a “local playback queue” as contemplated by claim 13 of the ’615 patent. Thus, Google’s products do not infringe the claim, and this order need not address Google’s additional non-infringement arguments.

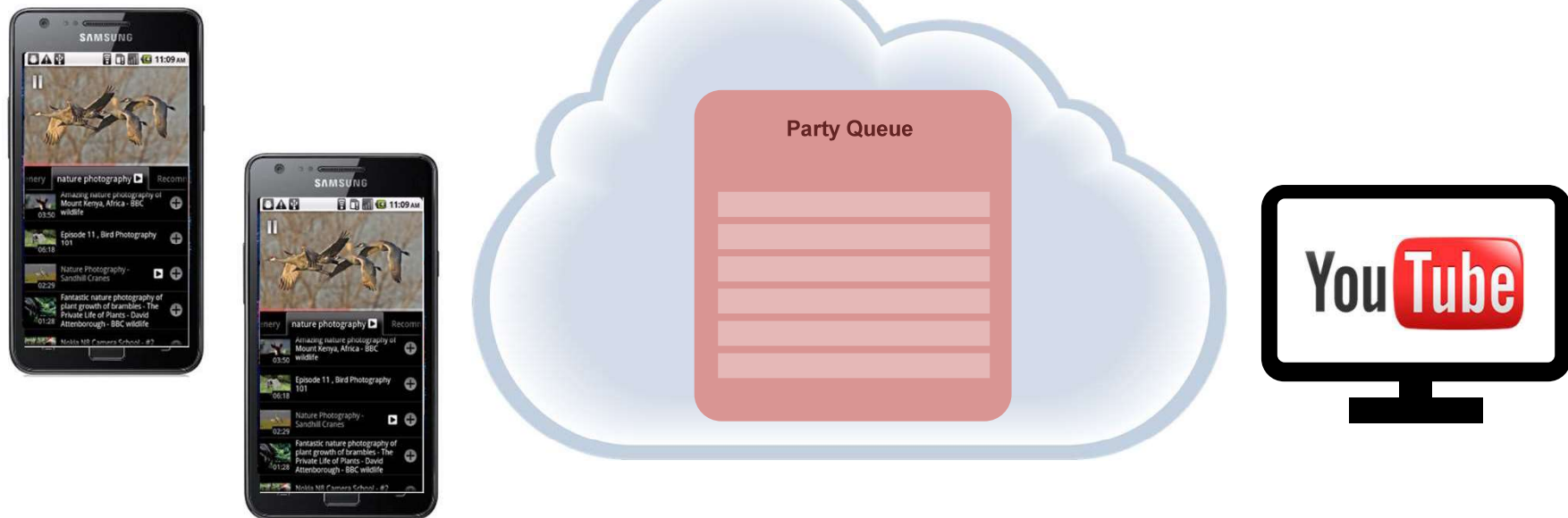
Dkt. 316 (Showdown Order) at 10-11

YTRv2 Party Mode Invalidates The Asserted Claims Of The '033 Patent

The Claims Recite “A Remote Playback Queue Provided By A Cloud-Based Computing System”

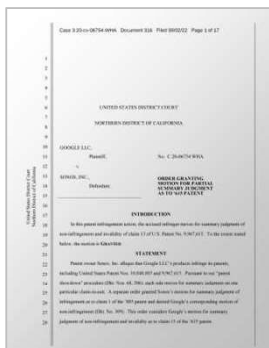
CLAIM 1		
1[pre].	A computing device comprising: [1.1] at least one processor; [1.2] a non-transitory computer-readable medium; and [1.3] program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:	
1.4	operating in a first mode in which the computing device is configured for playback of a remote playback queue provided by a cloud-based computing system associated with a cloud-based media service;	 Phone plays “remote playback queue provided by a cloud-based computing system”
1.5	while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for the remote playback queue;	
1.6	while displaying the representation of the one or more playback devices, receiving user input indicating a selection of at least one given playback device from the one or more playback devices;	
1.7	based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue , (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;	 TV takes over responsibility for playback of “the remote playback queue”
1.8	detecting an indication that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device; and	
1.9	after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the remote playback queue and the computing device is no longer configured for playback of the remote playback queue .	

Party Mode Discloses A “Remote Playback Queue Provided By A Cloud-Based Computing System”



Court's Construction Of "Playback Queue"

- The Court construed "playback queue" to mean "a list of videos selected for playback":



importing a new term. Accordingly, this order construes the term "playback queue" as "a list of multimedia content selected for playback."

Dkt. 316 (Showdown Order) at 8

- Playback queue that is "not local" to the phone and TV is "remote" according to Sonos:



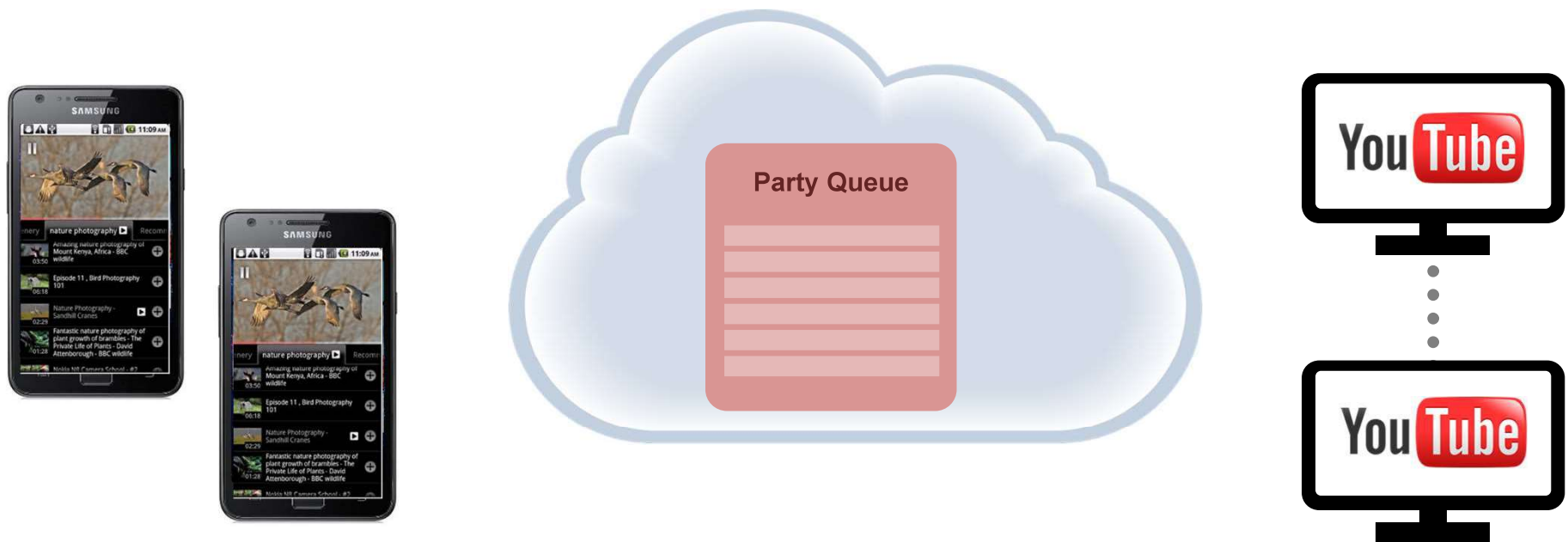
Dr. Schmidt
Sonos's Expert

236. As an initial matter, a POSITA would have understood at the time of the '033 Patent that the word "remote" before the phrase "playback queue" indicates that the "playback queue" is not local to whatever device is to playback media identified by the contents of the "playback queue," such as a "playback queue" that is accessible to a device over a network. A POSITA would

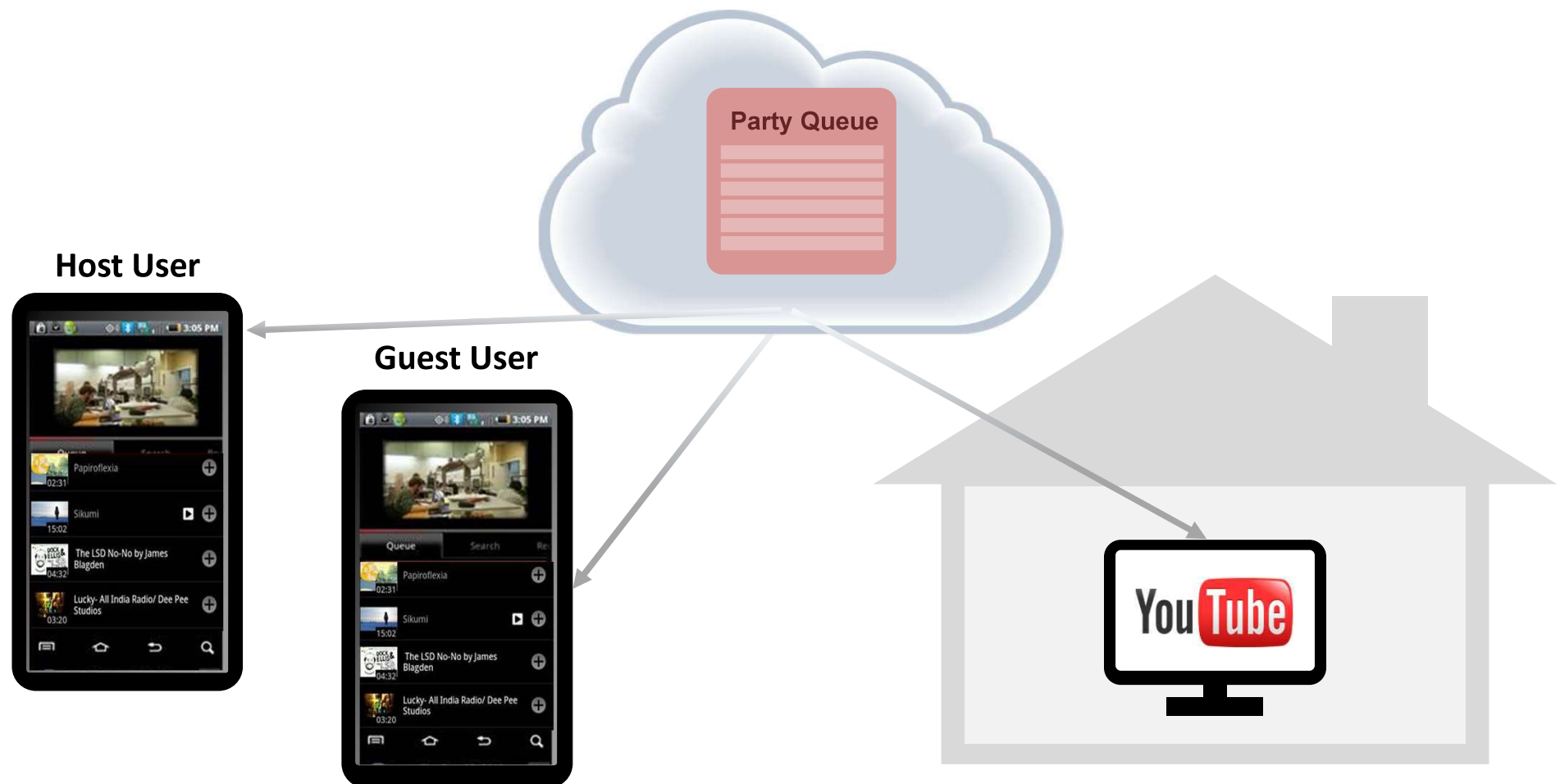
Dkt. 487-2 (Schmidt Op. Rpt.) at ¶236

Party Mode Includes A “Remote Playback Queue”

- Party mode allows friends to edit and play back a party queue maintained in the cloud together on their phone or TVs



Party Mode Includes A “Remote Playback Queue”



Party Queue Is A Remote Playback Queue

- Party queue stores the “definitive version” of the list of videos selected for playback “on the server”:

```

**
* Content service implementation for party mode. The definitive version of the
* playlist lives on the server, and multiple remote controls can change it at
* the same time.
*
* @author bobohalma@google.com (Ramona Bobohalma)
*/

```

MSJ, Ex. 11 (Bhatta Op. Rpt.), ¶176 (quoting ytremote/backend/SharedPlaylistContentService.java)

- The party queue is a “remote queue”:

```

/**
* Manages a remote queue (usually a party queue).
*
* @author danieldanciu@google.com (Daniel Danciu)
*/

```

MSJ, Ex. 11 (Bhatta Op. Rpt.), ¶177 (quoting ytlounge/src/com/google/android/ytremote/backend/)

Party Queue Is Provided By The Cloud Servers



Dr. Bhattacharjee
Google's Expert

“[A] host user (Alice) could create a playback queue containing YouTube videos. The host user (Alice) can then use her YTR application to invite one or more guests (e.g., Bob and Carol) to share her playback queue. The playback queue was editable by all members of the party (Alice, Bob and Carol) and could be played back on the mobile device of the host user and guest users, as well as the host user's Screen(s). **The party queue was stored in a cloud server as a cloud queue, enabling multiple users to manage the queue during the party. When a host or guest user edited the party queue, the edit would be made in the cloud queue and then provided to the host and guest devices in the party.**”

Ex. 11 (Bhattacharjee Op. Rpt.) ¶171

Sonos's Expert Concedes That Party Queue Is A Remote Playback Queue



Dr. Schmidt
Sonos's Expert

Q. Let's take a very simple example. **Our party playlist has three videos, video 1, video 2 and video 3. That party playlist is stored in the cloud;** correct?

A. **The party playlist is stored in the cloud, yes. If we're in party mode, yes, that's correct.**

MSJ, Ex. 19 (Schmidt. Tr.) at 182:5-11

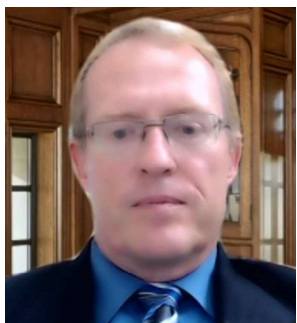
Q. A user creates a party playlist and it has three videos that have been selected for playback, video 1, video 2, video 3. **In party mode, the party playlist is provided to the lounge server and stored as a party playlist on the lounge server that contains video 1, video 2, and video 3.** Do you agree with me on that?

A. **In that hypothetical, under some assumptions I can imagine a world where that would happen, yes.**

MSJ, Ex. 19 (Schmidt. Tr.) at 184:22-185:6

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Party Queue Provides “List of Videos Selected For Playback” To Phones And TVs For Playback



Dr. Schmidt
Sonos's Expert

“[T]he the lounge server saves a copy of the set party playlist message and it changes the name it uses internally from queue to party queue, reflecting it’s now gone into party mode. And it will then subsequently use this save copy of the playlist it received from Alice in our example obtained from the set party playlist message to relay to any new Leanback screens or remote controls from guests, for example, that join the existing party session a copy of the playlist”

MSJ, Ex. 19 (Schmidt. Tr.) at 94:5-13

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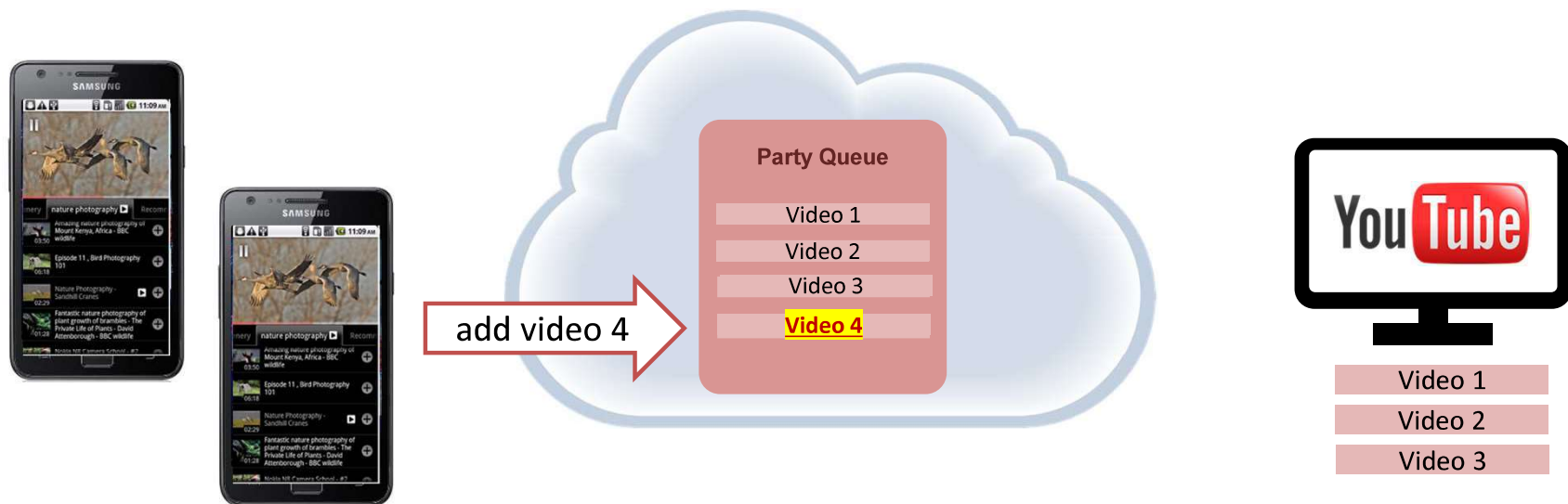
The Cloud-Hosted Party Queue “Runs the Show”

merely a mirror reflecting a subset of what is happening in the cloud queue. The songs set to play on Google Play Music, for example, are all dictated by the cloud queue. If the user adds or edits a playlist, the cloud queue changes. If the app creates a playlist, the cloud queue adapts. It is only *after* the cloud queue changes that anything can happen to the information stored locally on the playback device (see Bhattacharjee Decl. ¶¶ 81–84). This demonstrates that the groups of three items stored in each app are not lists of content selected for playback, but rather merely provide the means to *process* the lists for playback. In short, the cloud queue runs the show.

Dkt. 316 (Showdown Order) at 10

The Cloud-Hosted Party Queue “Runs the Show”

- An edit (e.g., add video) is first made in the party queue, and only thereafter provided to other devices



The Cloud-Hosted Party Queue “Runs the Show”



Dr. Bhattacharjee
Google's Expert

“If the user, adds, edits, or otherwise modifies the queue using the YTR application, the party queue stored on the MDx server changes and it is only after the cloud queue changes that updated information is sent to the Screens.”

MSJ, Ex. 12 (Bhattacharjee Reply Rpt.) ¶ 63; *see also* MSJ, Ex. 11 (Bhattacharjee Op. Rpt.) ¶ 171 (same)

“The MDx [i.e., Lounge] server implements queue management for the party queue, including ‘add’ to the queue, ‘remove’ from the queue, ‘move’ items from within the queue, clear, etc. These queue management functions are similar to the queue management functions provided by Sonos in 2011 and the Cloud Queue for the accused YouTube applications that was at issue in the Patent Showdown

MSJ, Ex. 12 (Bhattacharjee Reply Rpt.) ¶ 64

The Cloud-Hosted Party Queue “Runs the Show”



Dr. Schmidt
Sonos's Expert

Q. So we've now established that when the user edits the party playlist, an edit is made to the copy on the lounge server. And do you agree that it's only after that edit is made that the party playlist gets an updated – sorry, that the playback device gets an updated copy of the party playlist?

A. Under certain scenarios, yes, it would.

MSJ, Ex. 19 (Schmidt. Tr.) at 189:17-190:1

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The Cloud-Hosted Party Queue “Runs the Show”



Dr. Schmidt
Sonos's Expert

Q. So let's say Alice is in party mode with Bob. And Alice and Bob have a party playlist that has video 1, video 2 and video 3.... if Bob has a – makes an edit and adds video 4 to the party playlist, that edit is then going to be sent to the lounge server and replace the prior version of the party playlist, right?

A. It's possible. What's not – it's possible. There's scenarios under which other things could happen, but that's possible sure.

MSJ, Ex. 19 (Schmidt. Tr.) at 194:5-13

Q. Dr. Schmidt, so in that example, prior to the playback devices receiving the update from the lounge server, the lounge server will have four items, four videos, video 1, video 2, video 3 and video 4, whereas the playback device will only have videos 1, 2 and 3; correct?

A. Under a certain set of assumptions, that's possible, but there's other scenarios that might be different.

MSJ, Ex. 19 (Schmidt. Tr.) at 194:15-23

Q. So the lounge server's copy of the party playlist will need to be updated before the screen's [i.e., TV] copy of the party playlist can be updated?

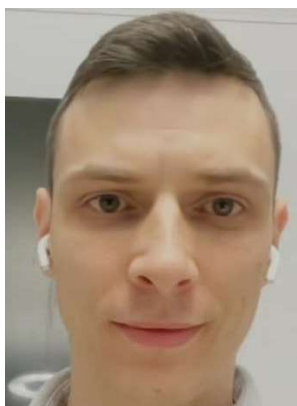
A. Again, assuming a number of conditions, that's my understanding of how it would work, that's correct.

MSJ, Ex. 19 (Schmidt. Tr.) at 196:18-23

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The Cloud-Hosted Party Queue Is The Source Of Truth

- Devices in the party refer to the list of videos provided by the party queue to playback



Janos Levai
Google Engineer

Q. **Where is the source of truth in Party Mode?**

A. In Party Mode, I believe that would be **the MDx server.**

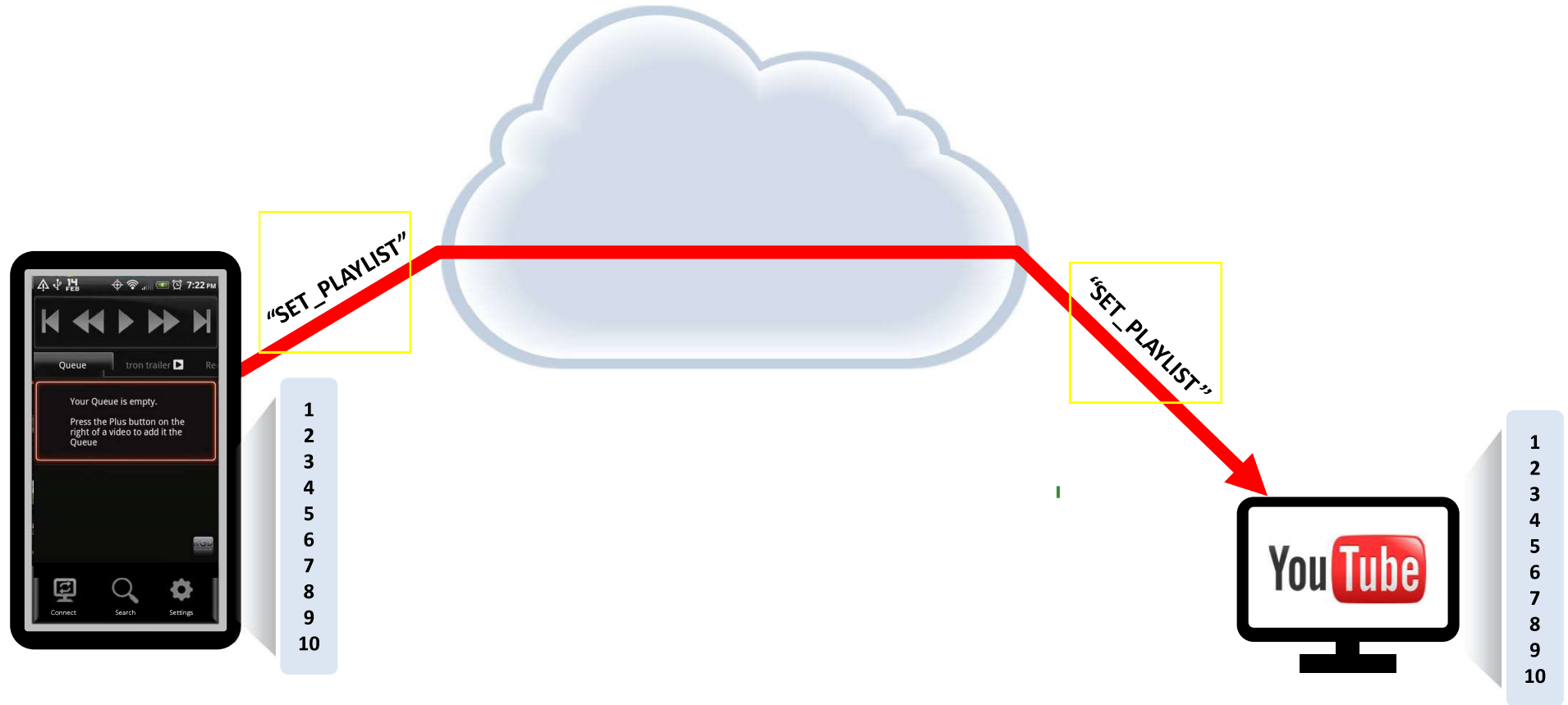
Q. And why do you believe that?

A. Well, because that's where, if a YouTube remote app joined the session, initiated Party Mode and sends a list of videos, the MDx server would keep a copy of it and then it would send that. It would update all the devices in that session with that list.

MSJ Reply, Ex. 1 (Levai. Tr.) at 59:5-14

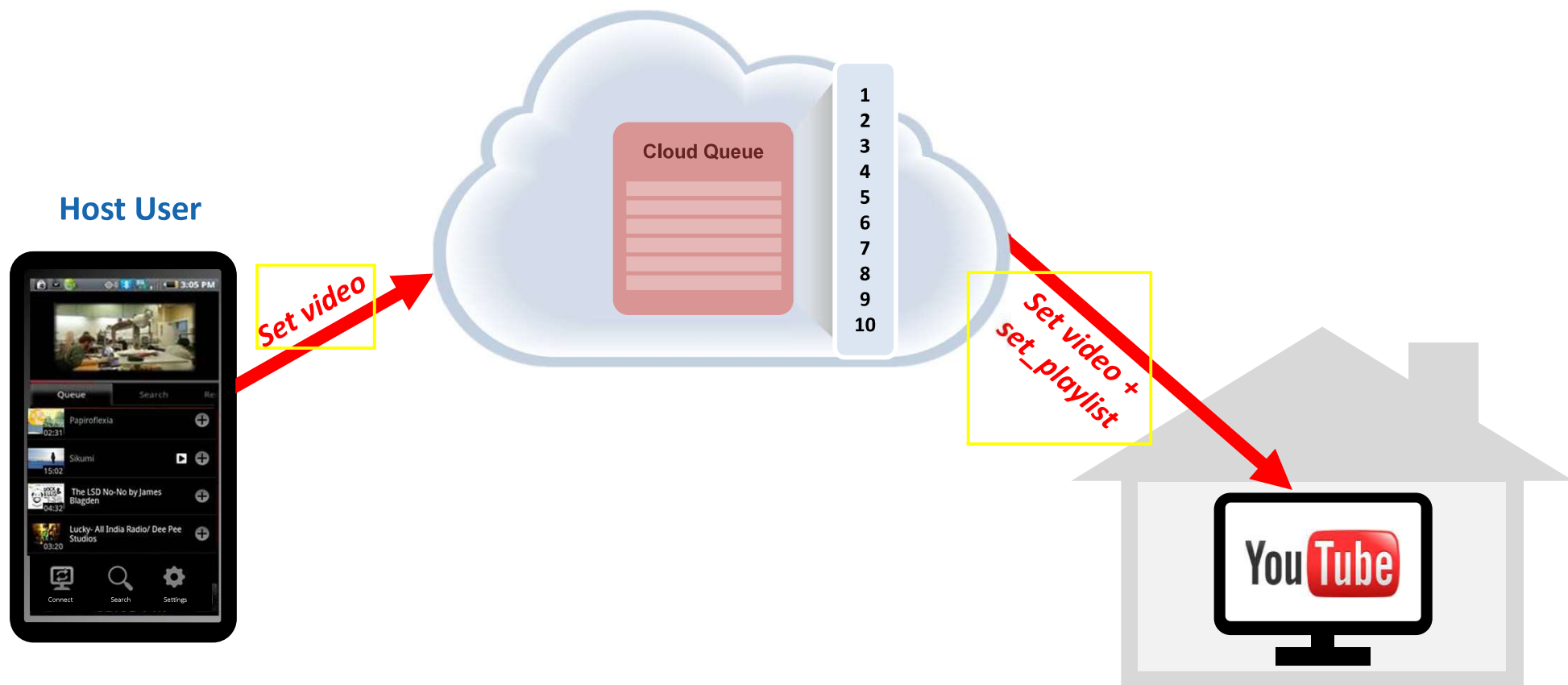
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Non-Party Mode Relays List Of Videos To The Playback Device



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Party Mode Stores The Queue In The Cloud



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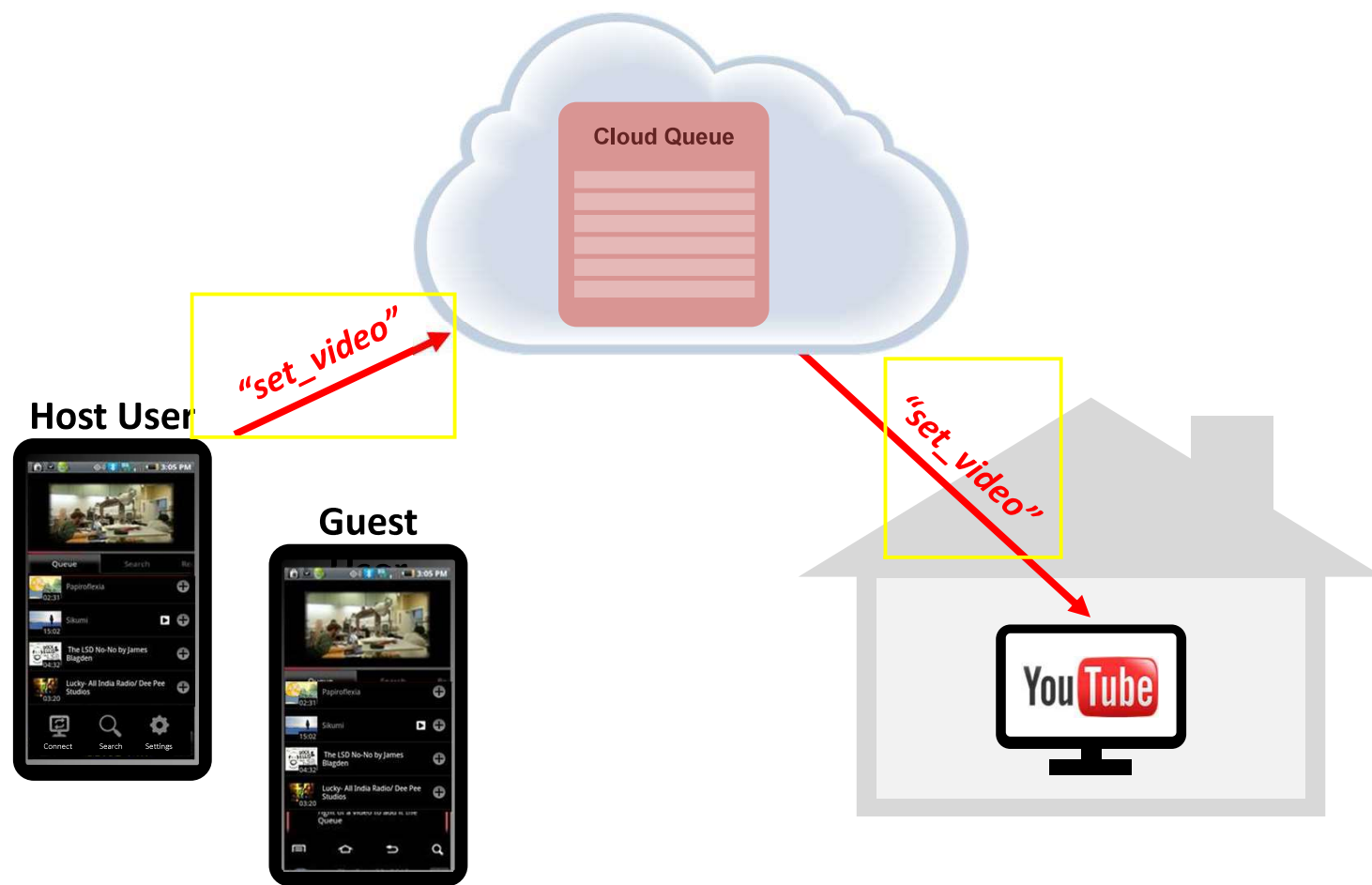
Party Mode Discloses Playing A Remote Playback Queue

The Only Other Limitation Sonos Challenges Is Limitation 1.7

CLAIM 1	
1[pre]. A computing device comprising: [1.1] at least one processor; [1.2] a non-transitory computer-readable medium; and [1.3] program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:	
1.4 operating in a first mode in which the computing device is configured for playback of a remote playback queue provided by a cloud-based computing system associated with a cloud-based media service;	
1.5 while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for the remote playback queue;	
1.6 while displaying the representation of the one or more playback devices, receiving user input indicating a selection of at least one given playback device from the one or more playback devices;	
1.7 based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;	
1.8 detecting an indication that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device; and	
1.9 after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the remote playback queue and the computing device is no longer configured for playback of the remote playback queue.	

YouTube Remote Application Sends An Instruction To Cast Playback

based on receiving the user input, **transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device**, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;

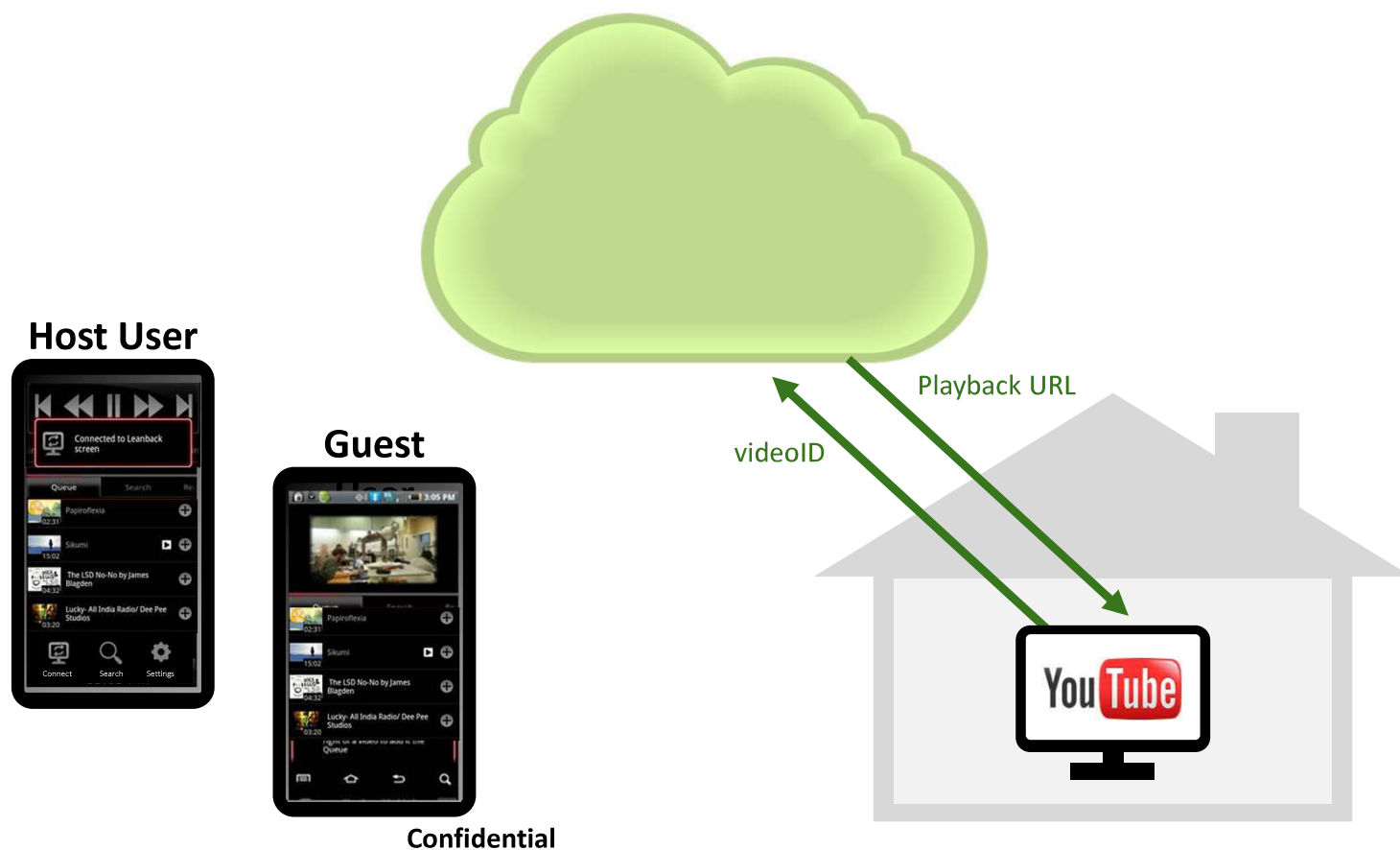


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The Instruction Configures The Playback Device

based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) **communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue**, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;

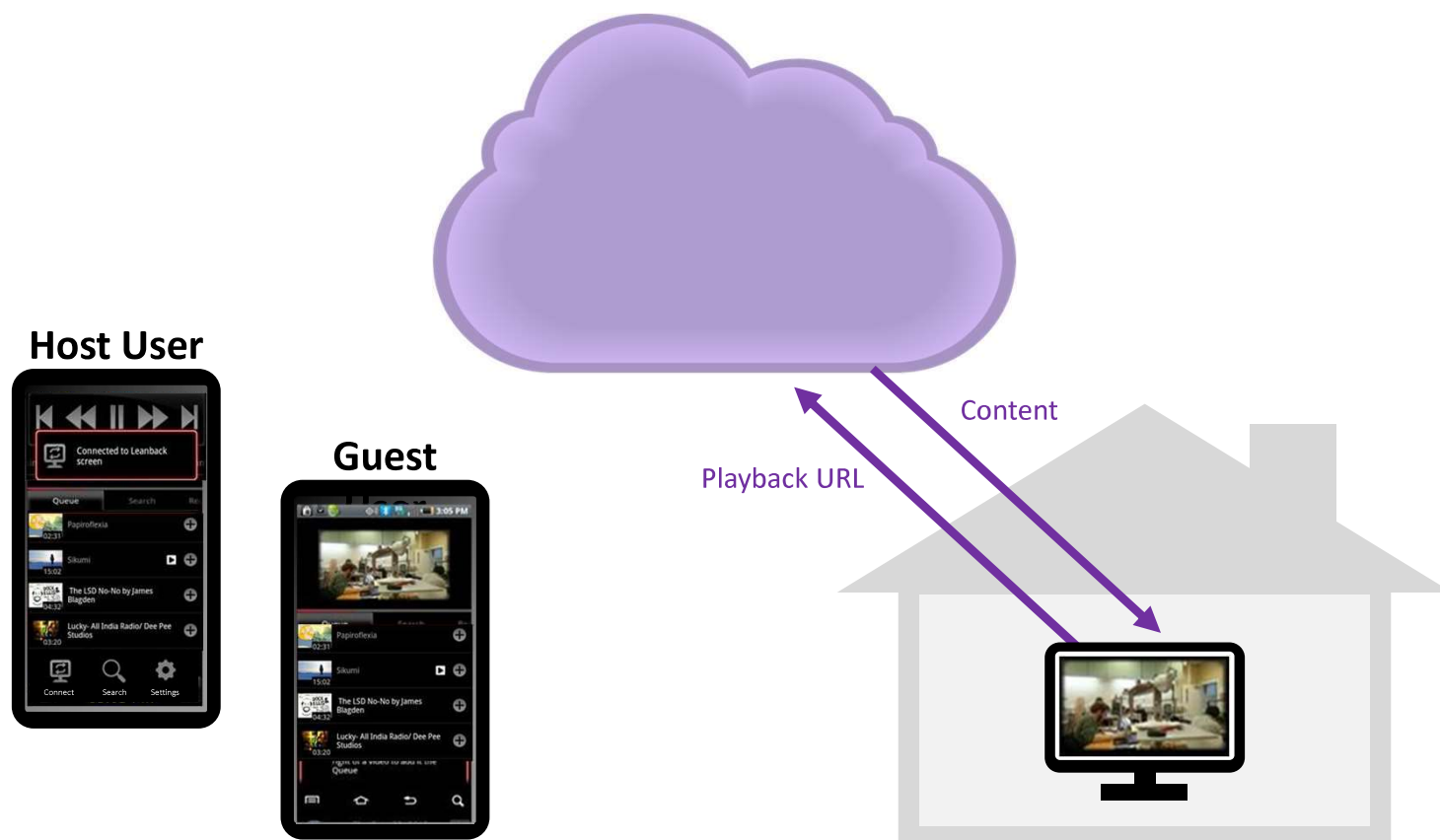
Playback URL is data identifying a next media item



Playback Device Then Retrieves The Media Content From The Cloud

based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) **use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;**

Playback URL is used to retrieve media item that is played back



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Bandaid URL Meets Limitation 1.7(i)-(iii)

wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item

'033 patent at Limitation 1.7

[Z]one player 602 may contain a uniform resource locator (URL) that specifies an address to a particular audio track in the cloud. Using the URL, the zone player 602 may retrieve the audio track from the cloud, and ultimately play the audio out of one or more zone players.

'033 patent at 11:65-12:4

Bandaids URLs Identify “Next” Media Items



Dr. Bhattacharjee
Google's Expert

After receiving the **SET_PLAYLIST** and **SET_VIDEO** messages from the Lounge server in either of the above scenarios, the Screens are configured to communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue. For example, **for each item of media to be played back, the HTTP player issues a get_video_info request to obtain a Bandaids URL.**

MSJ, Ex. 11 (Bhattacharjee Op. Rpt.) ¶171

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Bandaids URLs Identify “Next” Media Items



T0

TV receives instruction (SET_VIDEO)

T1

TV obtains Bandaids URL to playback Video 1

T2

TV obtains Bandaids URL to playback Video 2

T3

TV obtains Bandaids URL to playback Video 3

Bandaid URLs Identify “Next” Media Items

wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item

'033 patent at Limitation 1.7

Sonos's Argument Is Inconsistent With Dr. Schmidt's Opinions

- Dr. Schmidt identified Bandaid URLs as “data identifying a next one or more media items that are in the remote playback queue” to accuse Google's NIA



Dr. Schmidt
Sonos's Expert

Assuming that Dr. Bhattacharjee's articulation is accurate, it appears to me that the Receiver would still communicate (via the aforementioned “request”) with the YouTube cloud infrastructure (“Onesie” agent) to obtain data (e.g., Bandaid URL) identifying a next one or more media items that are in the remote playback queue and the Receiver would still use the obtained data (e.g., Bandaid URL) to retrieve at least one media item in the remote playback queue (e.g., certain “chunks of media content”). *See also, e.g.,* GOOG-SONOSNDCA-00073494, 95 (“Onesie only

MSJ, Ex. 14 (Schmidt Opening Rpt.), ¶1502

Sonos Does Not Challenge Any Other Limitations

YouTube Remote Invalidates Claim 1 Of The '033 Patent

1. A computing device comprising:

at least one processor;

a non-transitory computer-readable medium; and

program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:

operating in a first mode in which the computing device is configured for playback of a remote playback queue provided by a cloud-based computing system associated with a cloud-based media service;

Mobile Phone Plays A Remote Playback Queue Provided By A Cloud-Based Computing System

while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for the remote playback queue;

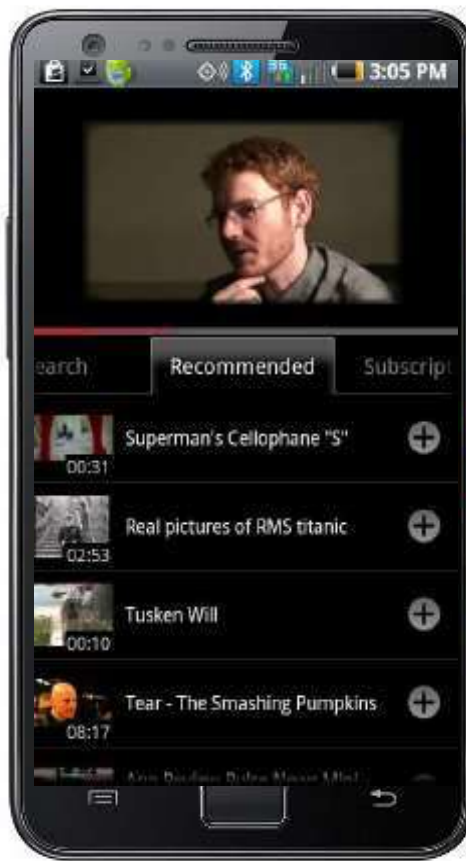
while displaying the representation of the one or more playback devices, receiving user input indicating a selection of at least one given playback device from the one or more playback devices;

based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;

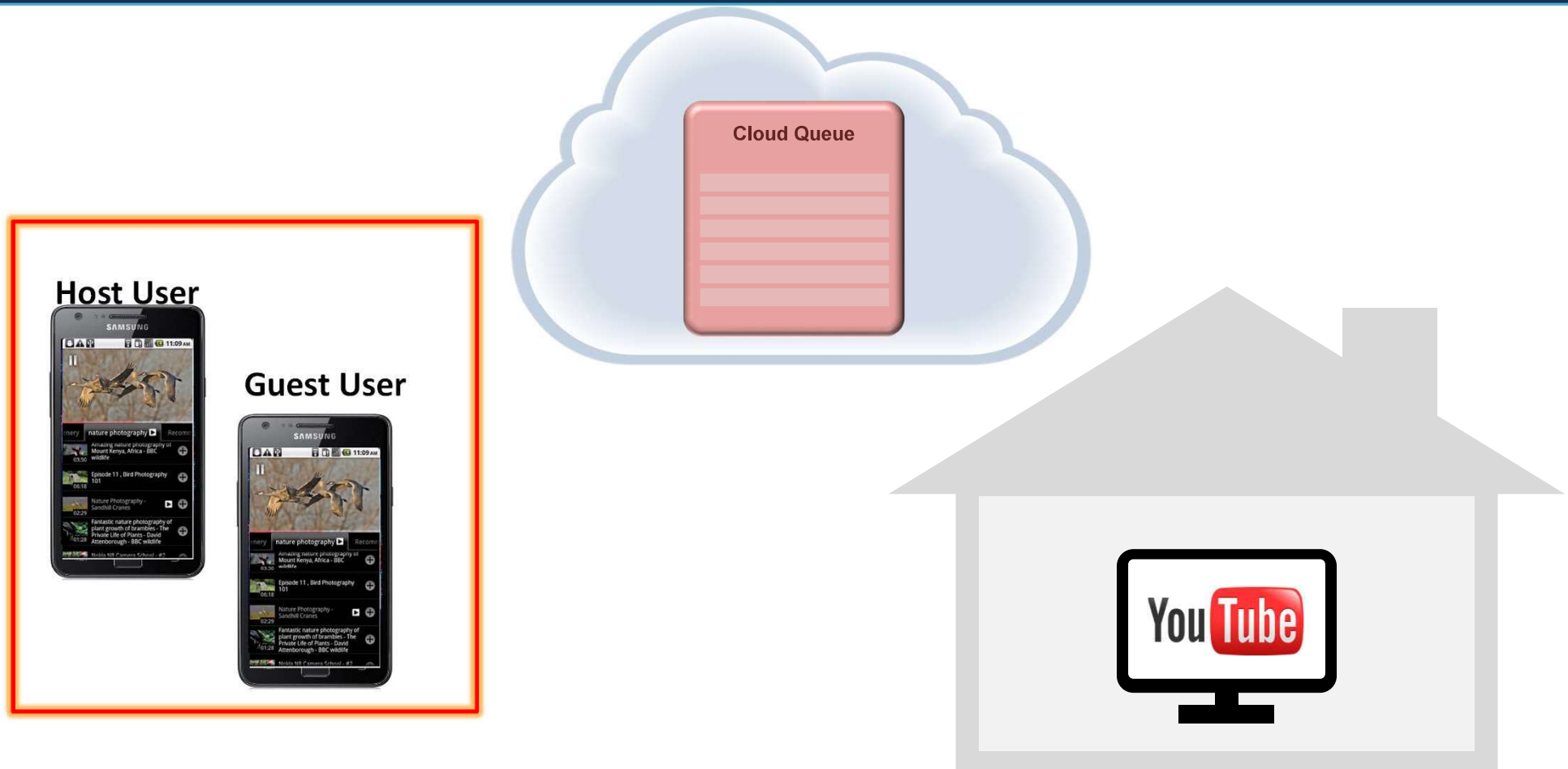
detecting an indication that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device; and

after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the remote playback queue and the computing device is no longer configured for playback of the remote playback queue.

The Computing Device



Computing Devices Play Back Videos From The Cloud Queue



YouTube Remote Invalidates Claim 1 Of The '033 Patent

✓	1. A computing device comprising:
✓	at least one processor;
✓	a non-transitory computer-readable medium; and
✓	program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:
✓	operating in a first mode in which the computing device is configured for playback of a remote playback queue provided by a cloud-based computing system associated with a cloud-based media service;
	while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for the remote playback queue;
	while displaying the representation of the one or more playback devices, receiving user input indicating a selection of at least one given playback device from the one or more playback devices;
	based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;
	detecting an indication that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device; and
	after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the remote playback queue and the computing device is no longer configured for playback of the remote playback queue.

Mobile Phone Plays A Remote Playback Queue Provided By A Cloud-Based Computing System

Mobile Phone Choose Playback Device

U.S. Patent No. 9,490,998 (YouTube Remote Patent)

(12) **United States Patent**
Danciu et al.

(10) Patent No.: **US 9,490,998 B1**
(45) Date of Patent: **Nov. 8, 2016**

(54) **NETWORK-BASED REMOTE CONTROL**
(75) Inventors: **Daniel Danciu**, Zurich (CH); **Yaniv Bernstein**, Zurich (CH); **Ramona Bobohalma**, Adliswil (CH); **Oliver Heckmann**, Bach (CH); **Jasmine Langridge**, Zurich (CH); **Alin Sinpalean**, Zurich (CH)

(73) Assignee: **Google Inc.**, Mountain View, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1041 days.

(21) Appl. No.: **13/041,964**

(22) Filed: **Mar. 7, 2011**

(60) Provisional application No. 61/411,386, filed on Nov. 8, 2010.

(51) Int. Cl. (2006.01)
G06F 15/177 (2006.01)
H04L 12/28 (2006.01)
H04L 29/12 (2006.01)

(52) U.S. Cl. (2013.01)
CPC **H04L 12/2818** (2013.01); **H04L 29/1231** (2013.01)

(58) Field of Classification Search
USPC 340/12.22, 12.23
See application file for complete search history.

(56) References Cited



US009490998B1

OTHER PUBLICATIONS

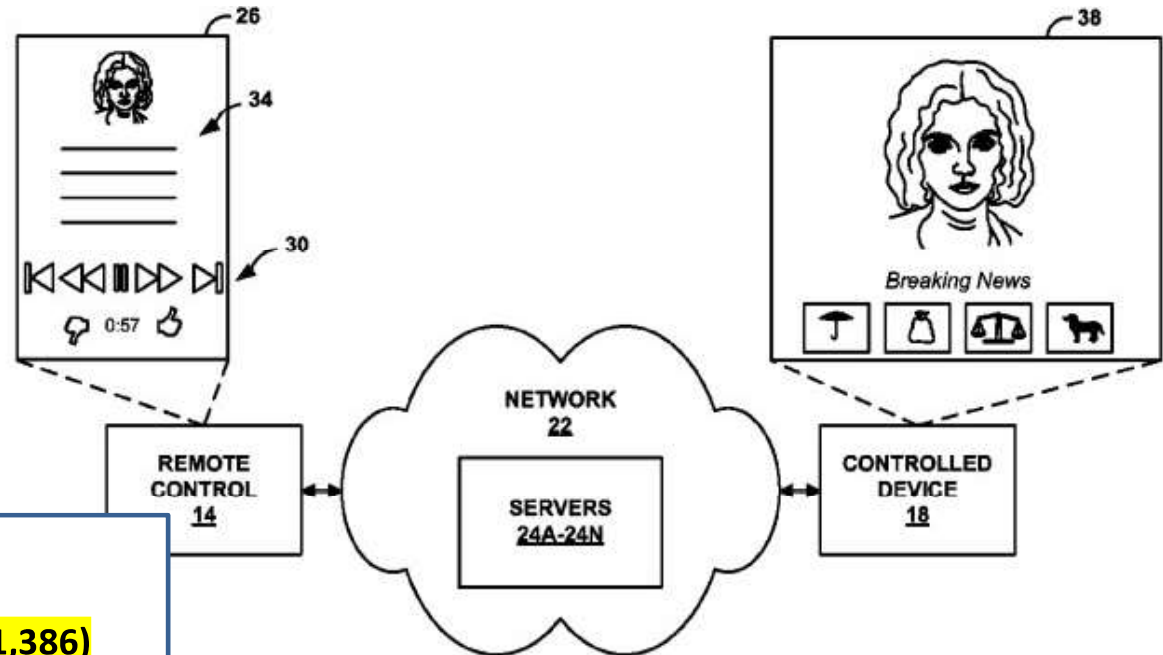
Schwartz, "Xfinity Remote Prototype: iPad Demo at NCTA Show," May 12, 2010 [online]. Retrieved from the Internet: <http://blog.comcast.com/2010/05/xfinity-remote-prototype-ipad-demo-at-ncta-show.html> (5 pgs.).
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(Continued)

Primary Examiner — Jennifer McMahon
Assistant Examiner — Yong Hang Jiang
(74) Attorney, Agent, or Firm — Shumaker & Sieffert, P.A.

ABSTRACT

The subject matter of the present disclosure can be implemented in, among other things a computer-readable storage medium encoded with instructions for causing a programmable processor to receive, by a server, a first message from a remote control that is distinct from and external to the server, wherein the first message includes a remote control identifier and control information for controlling one or more functions of at least one device other than the remote control. The instructions also cause the programmable processor to retrieve, by the server, a controlled device identifier that uniquely identifies a controlled device that is distinct from and external to the server. The instructions also cause



Filing date: **March 7, 2011**
Priority date: **Nov 8, 2011 (Prov 61/411,386)**
Inventors: **Daniel Danciu, Yaniv Bernstein, Ramona Bobohalma, Oliver Heckmann, Jasmine Langridge, Alin Sinpalean.**

Prior Art YouTube Remote Patent Discloses Device-Picker

Remote controls **62** and controlled devices **64** may be paired using a variety of techniques. In some examples,

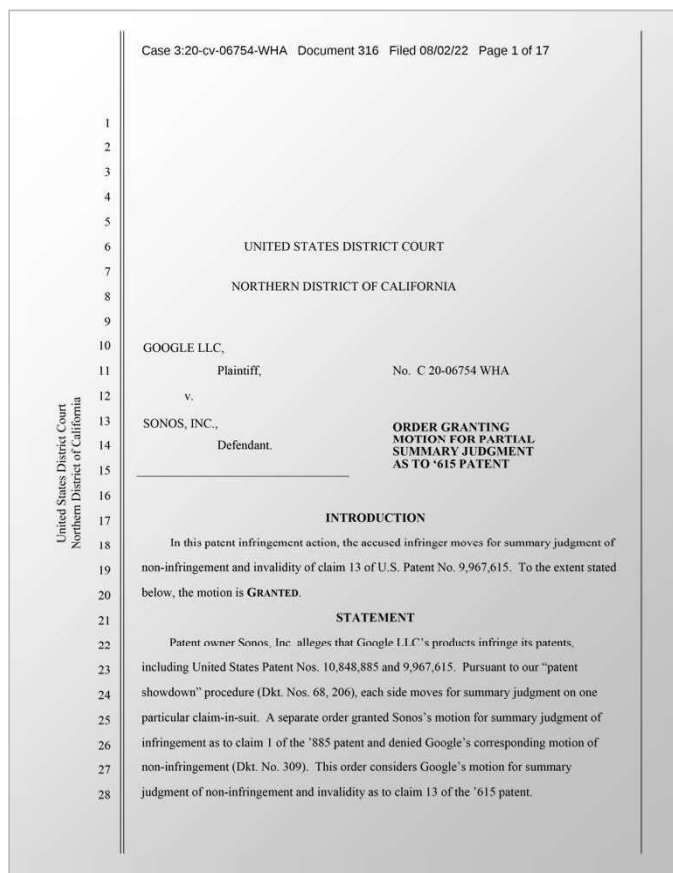
'998 patent at 8:11-12

A user may use the remote control application of remote control **75**, for example, to initiate contact with a server, such as server **24**, for pairing remote control **75** to one or more controlled devices, such as controlled device **18** shown in FIG. 1. In some examples, the user may also utilize the remote control application of remote control **75** to select one or more previously paired controlled devices, and to send control messages to one or more paired controlled devices. For example, the user may interact with user interface **84** and/or display **88** to interact with and control any available controlled devices.

'998 patent at 10:62-11:6



The Court Found Device-Picker Limitation Obvious In View Of The '998 Patent



The '998 patent is prior art. It was filed on March 7, 2011, and claims priority to an earlier provision application filed in November 2010. The patent's inventors were involved with the development of the YouTube Remote system, and the patent relates to controlling playback on a playback device through a control device. The '998 patent disclosed that

[i]n some examples, the user may also utilize the remote control application of remote control 75 to *select one or more previously paired controlled devices*, and to send control messages to one or more paired controlled devices. For example, the user may interact with user interface 84 and/or display 88 to interact with and control any available controlled devices.

(see '998 patent at 10:62–11:6 (emphasis added)). Thus, the patent disclosed that a “user interface” of a “remote control” (e.g., a smart phone) can display “previously paired controlled devices” (e.g., a television) so that a user may select and control “one or more paired controlled devices” (*ibid.*) The patent, therefore, taught the “selection of the particular playback device from the identified playback devices” as contemplated by the '615 patent.

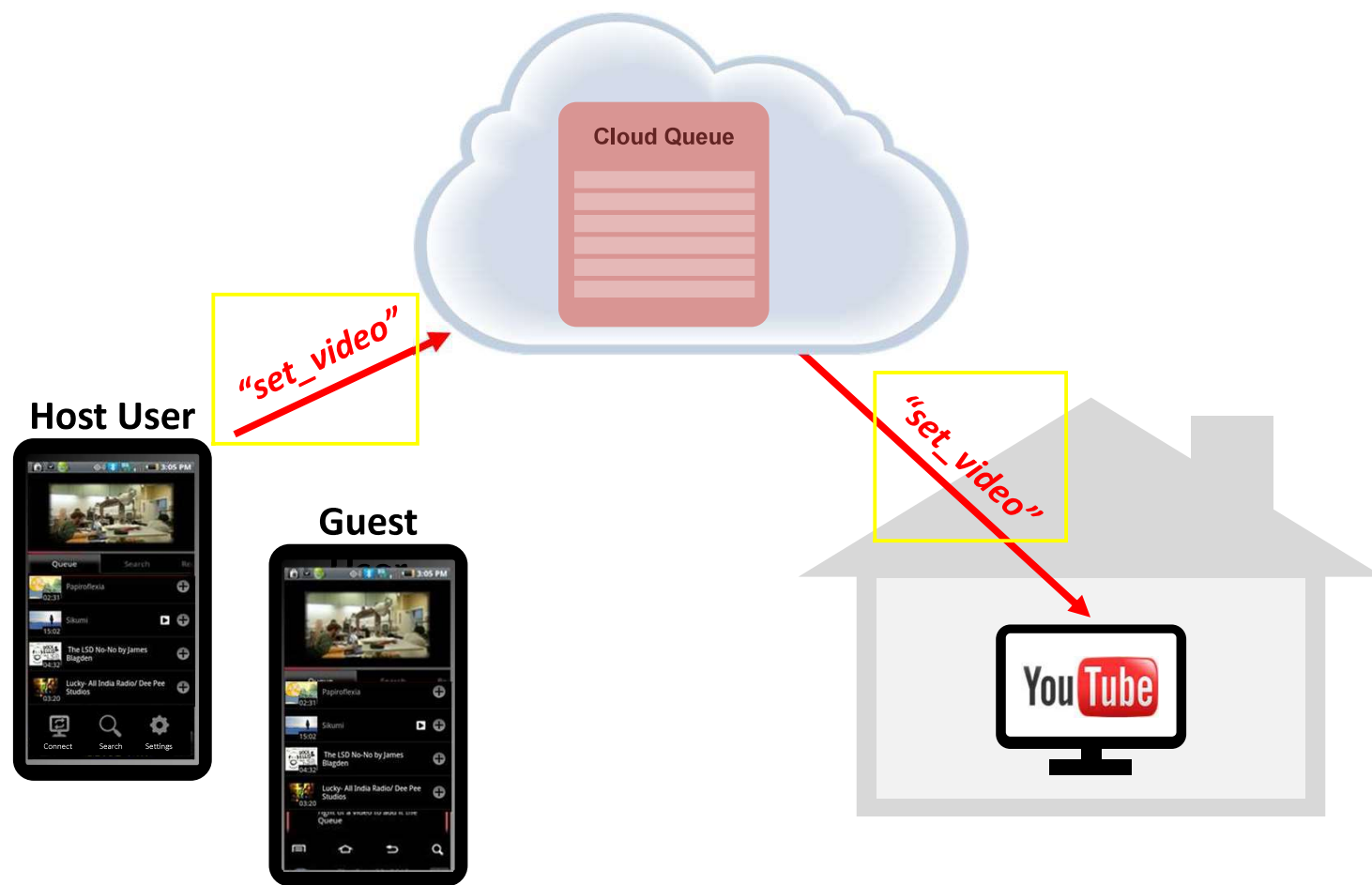
Dkt. No. 316 (Order) at 16

YouTube Remote Invalidates Claim 1 Of The '033 Patent

✓	1. A computing device comprising:	Mobile Phone Able to Play Videos from Cloud
✓	at least one processor;	
✓	a non-transitory computer-readable medium; and	
✓	program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:	Mobile Phone Chooses Device to Play Videos
✓	operating in a first mode in which the computing device is configured for playback of a remote playback queue provided by a cloud-based computing system associated with a cloud-based media service;	
✓	while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for the remote playback queue;	
✓	while displaying the representation of the one or more playback devices, receiving user input indicating a selection of at least one given playback device from the one or more playback devices;	Playback Device Begins Playing from Cloud
	based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;	
	detecting an indication that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device; and	
	after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the remote playback queue and the computing device is no longer configured for playback of the remote playback queue.	

YouTube Remote Application Sends An Instruction To Cast Playback

based on receiving the user input, **transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device**, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;

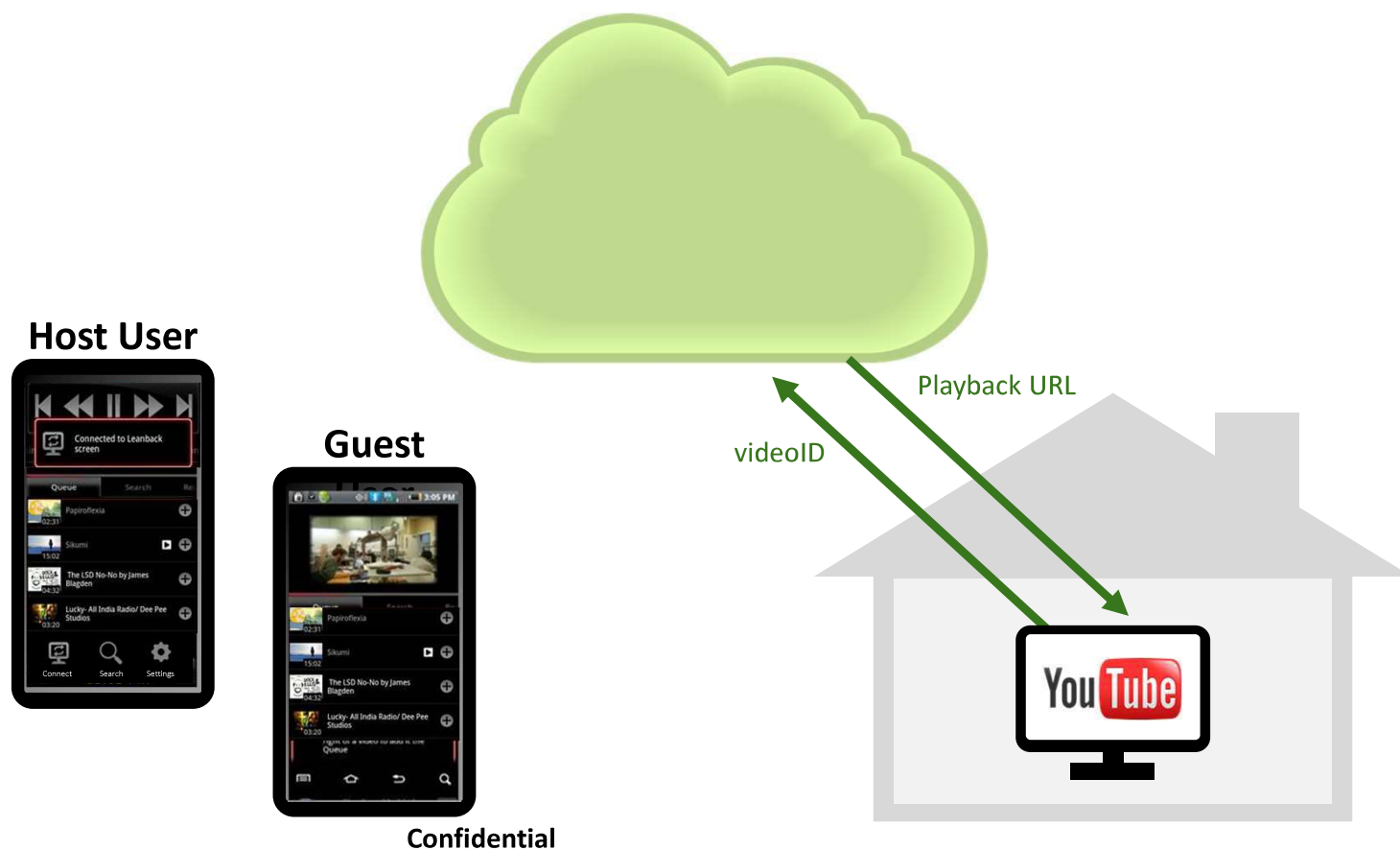


Confidential

The Instruction Configures The Playback Device

based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) **communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue**, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;

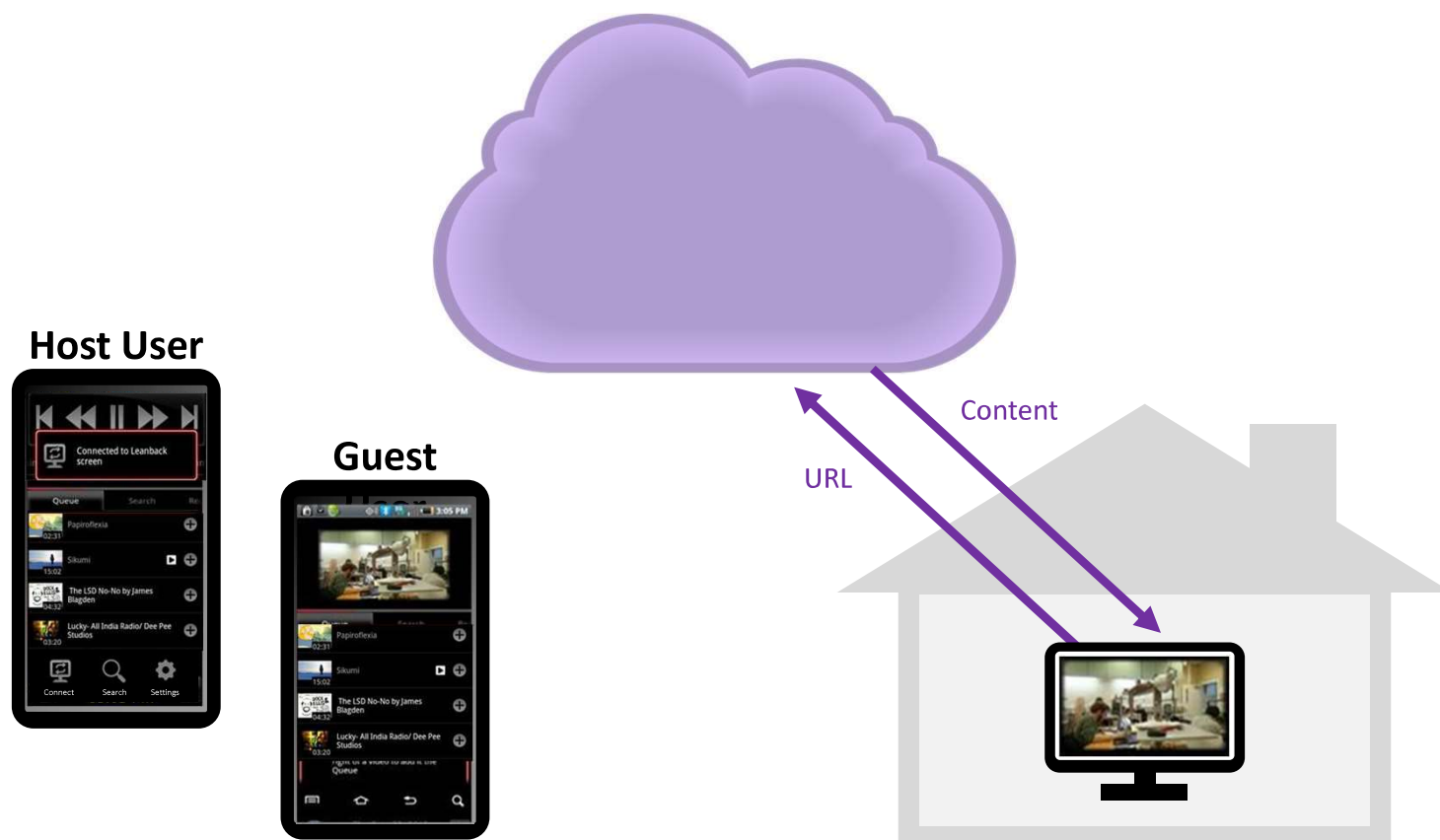
Playback URL is data identifying a next media item



Playback Device Then Retrieves The Media Content From The Cloud

based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) **use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;**

Playback URL is used to retrieve media item that is played back

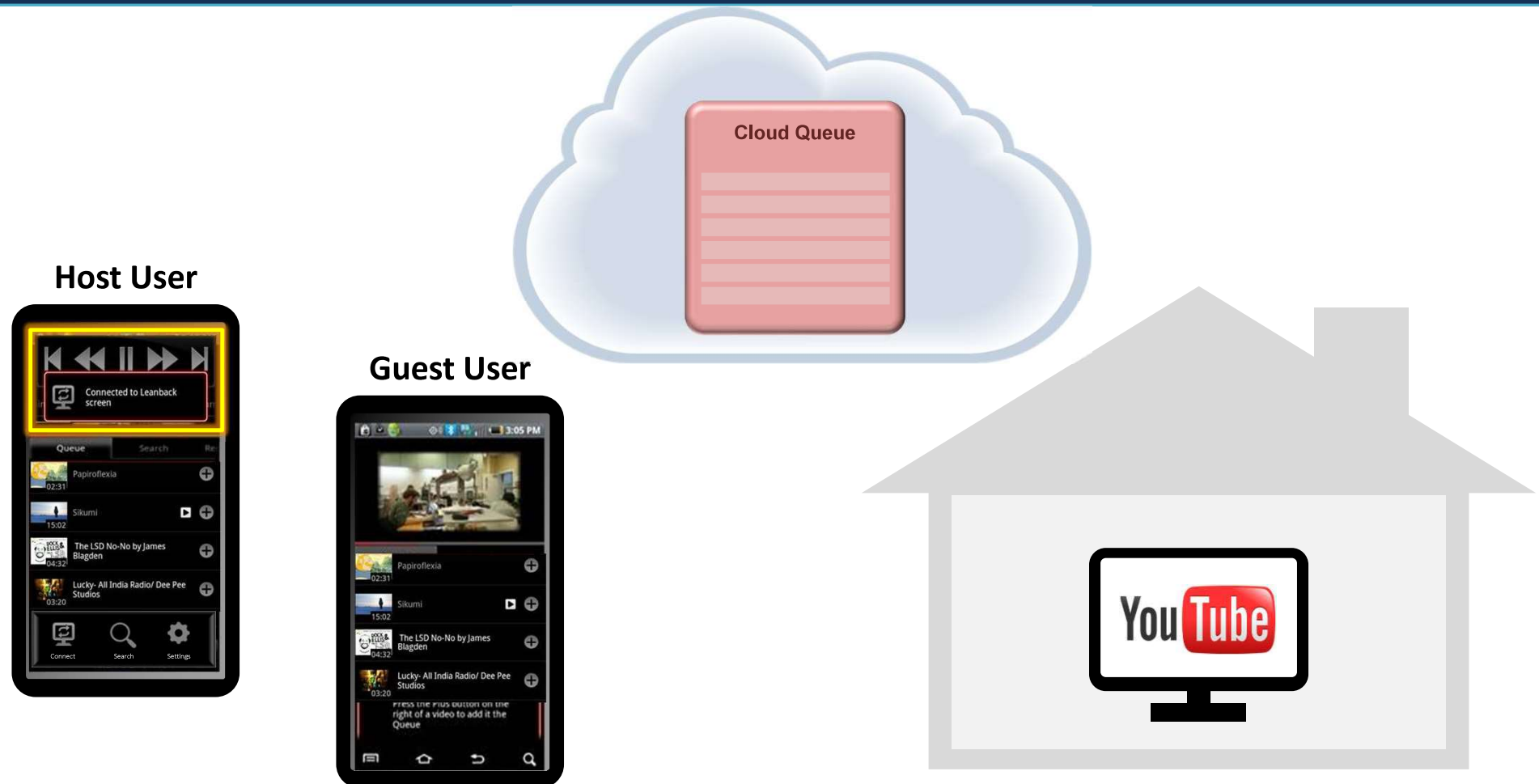


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YouTube Remote Invalidates Claim 1 Of The '033 Patent

✓	1. A computing device comprising:	Mobile Phone Able to Play Videos from Cloud
✓	at least one processor;	
✓	a non-transitory computer-readable medium; and	
✓	program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:	Mobile Phone Chooses Device to Play Videos
✓	operating in a first mode in which the computing device is configured for playback of a remote playback queue provided by a cloud-based computing system associated with a cloud-based media service;	
✓	while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for the remote playback queue;	
✓	while displaying the representation of the one or more playback devices, receiving user input indicating a selection of at least one given playback device from the one or more playback devices;	Playback Device Begins Playing from Cloud
✓	based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;	
	detecting an indication that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device; and	Mobile Phone Stops Its Own Playback and Becomes a Remote
	after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the remote playback queue and the computing device is no longer configured for playback of the remote playback queue.	

Youtube Remote Receives An Indication That Playback Is Transferred And Becomes The Remote



YouTube Remote Invalidates Claim 1 Of The '033 Patent

✓	1. A computing device comprising:	Mobile Phone Able to Play Videos from Cloud
✓	at least one processor;	
✓	a non-transitory computer-readable medium; and	
✓	program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:	
✓	operating in a first mode in which the computing device is configured for playback of a remote playback queue provided by a cloud-based computing system associated with a cloud-based media service;	Mobile Phone Chooses Device to Play Videos
✓	while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for the remote playback queue;	
✓	while displaying the representation of the one or more playback devices, receiving user input indicating a selection of at least one given playback device from the one or more playback devices;	Playback Device Begins Playing from Cloud
✓	based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;	
	detecting an indication that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device; and	Mobile Phone Stops Its Own Playback and Becomes a Remote
✓	after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the remote playback queue and the computing device is no longer configured for playback of the remote playback queue.	

YTR v2 Is Prior Art

YRTv2 Is Prior Art

- Sonos priority date is December 30, 2011
- Sonos is not claiming an earlier priority date for the '033 patent
- YTRv2 launched on July 29, 2011 with party mode

Party Mode

Party mode allows multiple users to connect to the same screen, queue up and watch videos together. All members of the party can add/reorder/delete videos to the same 'Shared Queue' of videos, which is being played on the Leanback screen. It basically solves this problem: <http://xkcd.com/920/>.

I've designed and implemented the shared queue management(both android app and server) cl/18357652 cl/18343670

Redesigned the party mode initialization to be invitation based: cl/18677970, cl/18636464

Launched in the version 2 of the remote.

MSJ, Ex. 18

Changelog for YouTube Remote

Jan 26, 2012	UPDATE	Version 3.1.0
Jan 13, 2012	UPDATE	Version 3.0.1
Aug 10, 2011	UPDATE	Version 2.0.7
Jul 29, 2011	UPDATE	Version 2.0.3
Jun 26, 2011	MORE DOWNLOADS	>250,000 downloads
Jan 12, 2011	UPDATE	Version 1.4
Jan 6, 2011	UPDATE	Version 1.3
Dec 24, 2010	MORE DOWNLOADS	50,000-250,000 downloads
Dec 17, 2010	UPDATE	Version 1.2
Dec 4, 2010	UPDATE	Version 1.1

MSJ at 2 (citing <https://web.archive.org/web/20110822085859/https://www.appbrain.com/app/youtuberemote/com.google.android.ytremote>)

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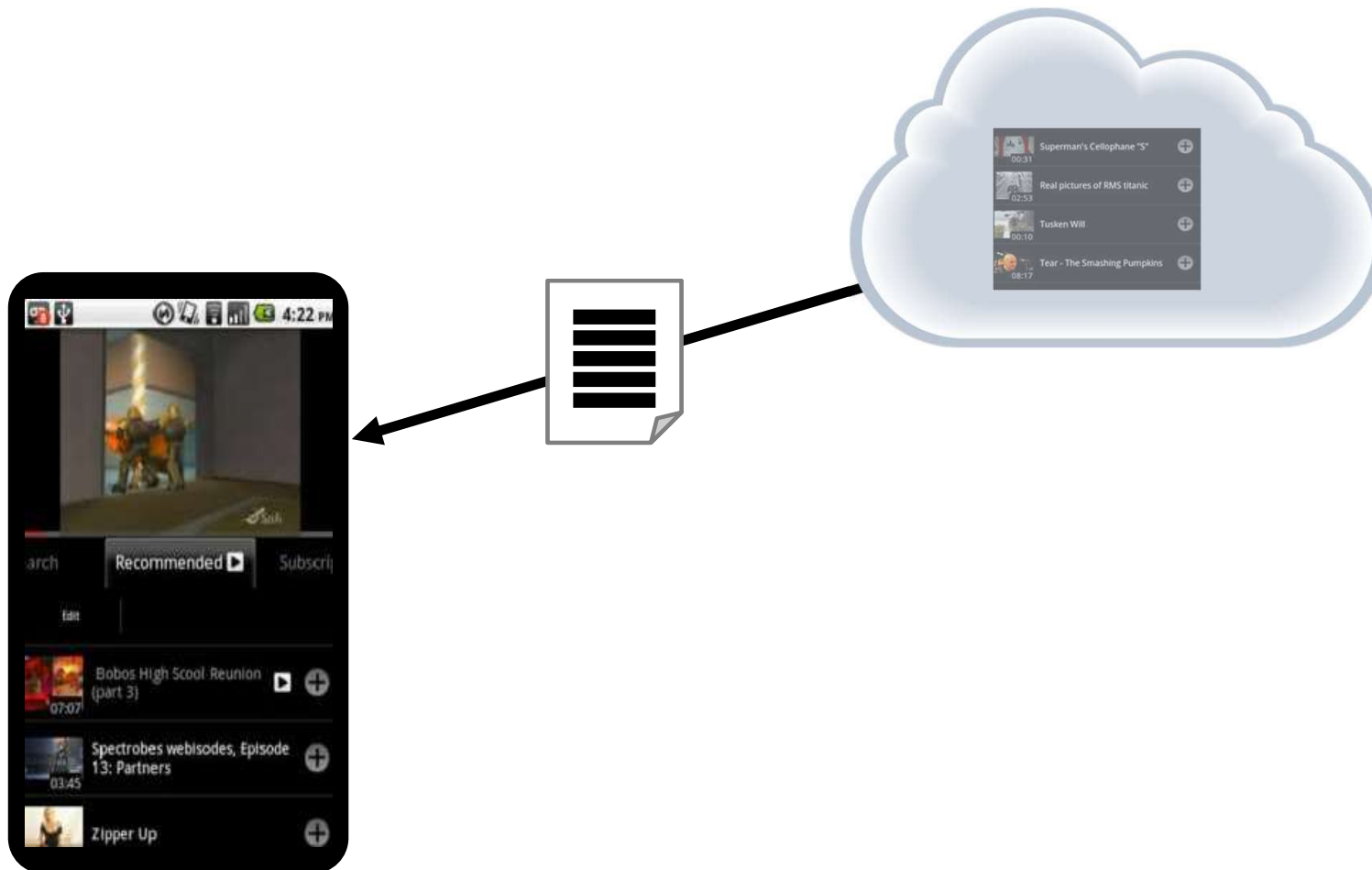
Service-Recommended Videos

User Can Playback A List Of Recommended Videos Provided By A Cloud Server



Sonos MTS, Ex. L (Dkt. No. 464-13) at 11 – Google Invalidity Contentions

List Of Recommended Videos Is Provided By The Cloud Service



Phone Plays The “List” Of Recommended Videos Provided By The Cloud Servers



Dr. Bhattacharjee
Google's Expert

The backend/RealStationService.java file creates the recommended station by retrieving a list of recommended videos from the YouTube cloud servers using a URL created by backend/station/UrlBuilder.recommended(). See RealStationService.java, line 149. The URL that is created to retrieve the list of recommended videos is found in UrlBuilder.java, line 177, and the host name in this URL is www.youtube.com, which is a cloud-based service. The recommended videos are returned as a list. See backend/PagedStationContentService.java, line 71; see also backend/logic/YouTubeService.java, lines 159-179 ("**@return the list of videos in the station**"); backend/station/GDataYouTubeService.java, lines 465-479. The code is configured to get 10 recommended videos from the cloud service at a time. See PagedStationContentService.java, lines 16-39.

Sonos's Expert Is Wrong About The "+" Icon



Dr. Schmidt
Sonos's Expert

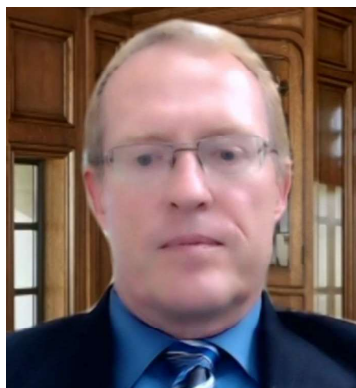
remote controls do not playback any videos from anywhere but their *local* playback queue. In order for any recommended videos to be played back by a remote control, a user would have to add such videos to the local playback queue on the remote control. This is evidenced by the "+" icon that appears next to a recommended video. *See, e.g.,* Bhatta. Op. Report, ¶167. In the YTR System, playback queues are not auto-populated with recommended videos. Accordingly, in standalone

Dkt. No. 467-5 (Schmidt Rebuttal Rpt.), ¶ 138

✗ No source code support

✗ Does not address videos and images

Sonos's Expert Admits He Doesn't Know "What The Code Does"



Dr. Schmidt
Sonos's Expert

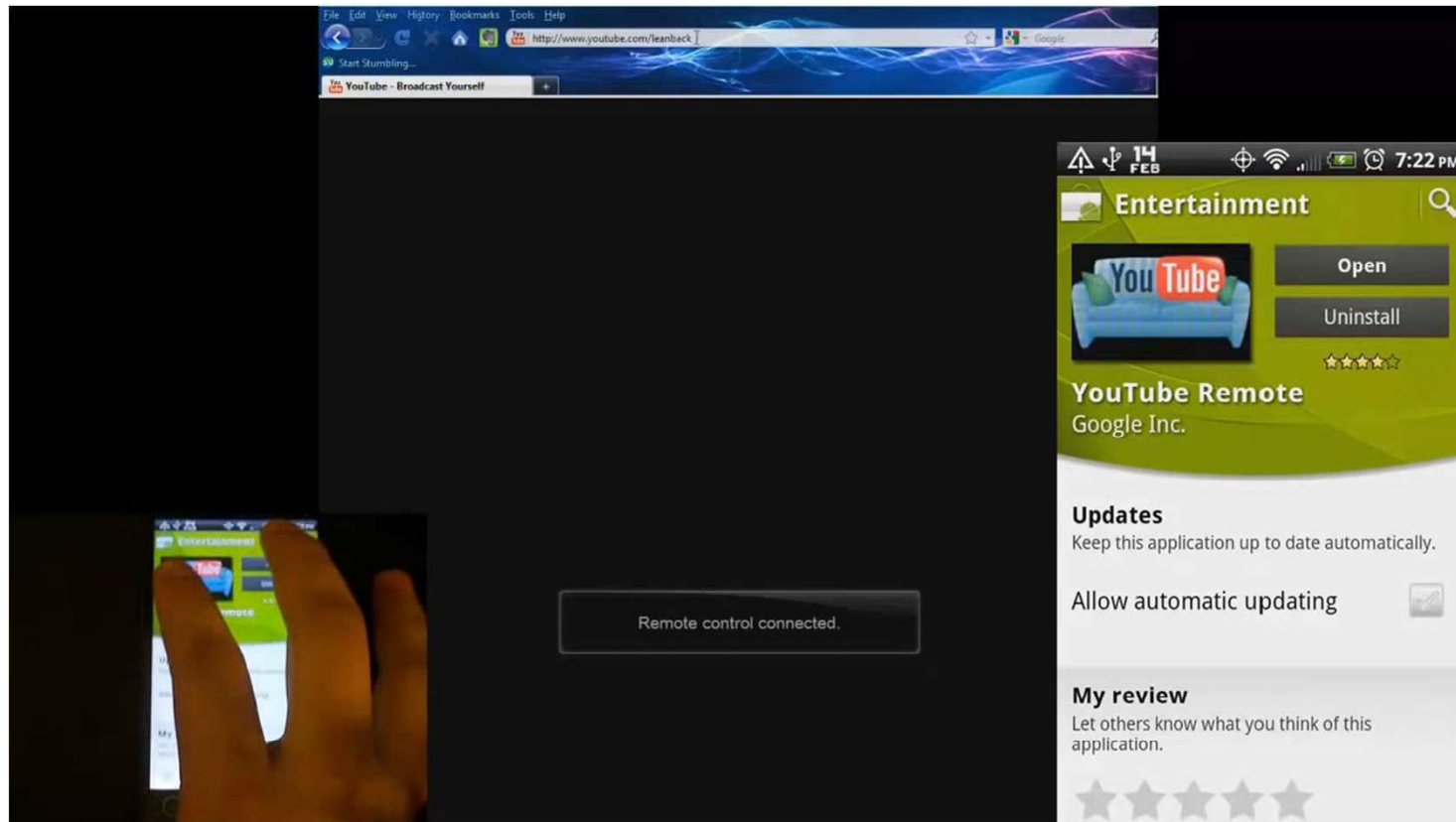
Q. Let me ask my question again because I don't think I'm getting an answer. **Yes or no, you can play videos in standalone mode on the YouTube Remote without pressing the plus button to add them to the queue?**

A. THE WITNESS: So it's my understanding that that's what the videos show. It's my understanding that that's the testimony from Mr. Levai. It's also my understanding that Dr. B has put forth a new theory in his reply report which was recently served where he says that there's other ways to play videos back using the recommender feature. As I mentioned, I have not had a chance to look at that code. I understand that was a newer theory that came out. So I haven't had a chance to substantiate one way or the other whether there is a way to use the recommended features. Again, if you take a look at Paragraph 172, you'll see a demonstration of how to use the plus button to add the elements to be played back. **But I haven't had a chance to review the code, so I don't want to speculate on whether what Dr. B says is correct or not because it's quite likely that I don't know what the code does and so I haven't seen it.**

Schmidt Tr. at 48:24-50:3

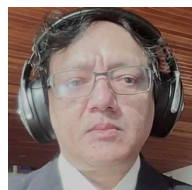
The Video Sonos Relies Upon Demonstrates Google's Position

- YouTube Remote prior art can play videos without having to first add them to a user-created queue with the “+” icon



GOOG-SONOSNDCA-00071318 at 1:19-1:42

Images Of The YouTube Remote Show That Sonos Is Wrong



Dr. Bhattacharjee
Google's Expert

Although the “+” icon can be used to add a recommended video to the user’s queue, the list of recommended videos can also be played back without adding them to the user’s queue. For instance, the image on the right shows the YouTube Remote prior art playing back a list of videos provided by the YouTube cloud servers in the “Search” workspace—in other words, without using the “+” icon to add the videos to the user’s queue.

Dkt. No. 475-3 (Bhattacharjee Reply Rpt.) ¶ 79

Source Code Shows Videos Can Be Added Without Pressing The “+” Icon



Dr. Bhattacharjee
Google's Expert

The source code for the YouTube Remote prior art similarly confirms that Dr. Schmidt is mistaken. It shows that **when a user selected a recommended video for playback, the videos auto-played one after another**. See WatchActivity.java, lines 643 (the “createContinuousPlayHandler” calls “moveToNextVideo” to autoplay the next video). **The list of recommended videos in the workspace were ‘paged,’ meaning that the YouTube Remote application fetched a list of ten recommended videos at a time**. See PagedStationContentService.java , lines 19-23. Once the last recommended video was reached, the mobile device fetched from the server the next ten recommended videos from the YouTube servers (thereby auto-populating the workspace) and continued to autoplay. See WatchActivity.java, line 903 (moveToNextVideo calls “hasNextPage”).

Dkt. No. 475-3 (Bhattacharjee Reply Rpt.) ¶ 80

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Sonos Fails To Distinguish The Accused Functionality For Limitation 1.4

- Sonos attempts to distinguish the YouTube Remote prior based on the incorrect assumption that recommended videos must be manually added using the “+” icon in the YouTube Remote

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18	GOOGLE LLC,	Case No. 3:20-cv-06754-WHA
19	Plaintiff and Counter-defendant,	Related to Case No. 3:21-cv-07559-WHA
20	v.	SONOS INC.'S RESPONSE TO
21	SONOS, INC.,	REQUEST FOR INFORMATION
22	Defendant and Counter-claimant.	Date: March 30, 2023
23		Time: 8:00 a.m.
24		Place: Courtroom 12, 19 th Floor
25		Judge: Hon. William Alsup
26		Complaint Filed: September 28, 2020

FILED UNDER SEAL

SONOS INC.'S RESP. TO REQUEST FOR INFO.
3:20-cv-06754-WHA

II. THE RECOMMENDED MEDIA ITEMS IN YTR ARE DIFFERENT FROM THE RECOMMENDED MEDIA ITEMS IN THE ACCUSED APPLICATIONS

As discussed above, in the prior art YTR system a user had to *manually* add a “service recommended media item” to a local queue on the phone in order to get the phone to play it back. Google’s accused YouTube applications don’t do this. Instead, in the accused system, the phone receives a list of “service-recommended media items” that have been selected for playback from a queue that is maintained by Google’s YouTube cloud infrastructure (*i.e.*, the Watch Next queue). *See, e.g.*, Dkt. 509.03, ¶¶125-28, 229, 241. **In other words, Google moved from (i) a system where a user manually adds desired items to a local queue, to (ii) a system in which a server delivers items stored in a cloud queue to a phone for playback.** This results in (to use the Court’s terminology) the remote queue “run[ning] the show” for the phone/sender. *Id.*; Dkt. 509.04, ¶132; Dkt. 509.05, ¶¶125-131. Put differently, in the Court’s analysis of the ’615 patent it found that the accused products used a remote queue rather than a “local” queue because the remote queue “ran the show” and the locally stored information simply mirrored a subset of what was in the cloud. That is how Google’s *accused* products work and it is essentially the opposite of how YTR worked.

Dkt. No. 553 (Sonos Response to Court’s Request for Information) at 2

Sonos Fails To Distinguish The Accused Functionality For Limitation 1.4

- Sonos raises a new argument that YouTube Remote may be generating “fresh batches” of 10 media items each time
- Sonos’s expert did not raise this argument and it is based solely on attorney argument

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18	GOOGLE LLC.	Case No. 3:20-cv-06754-WHA
19	Plaintiff and Counter-defendant.	Related to Case No. 3:21-cv-07559-WHA
20		SONOS INC.'S RESPONSE TO
21	SONOS, INC.,	REQUEST FOR INFORMATION
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23		Time: 8:00 a.m.
24		Place: Courtroom 12, 19th Floor
25		Judge: Hon. William Alsup
26		Complaint Filed: September 18, 2020
27		
28		

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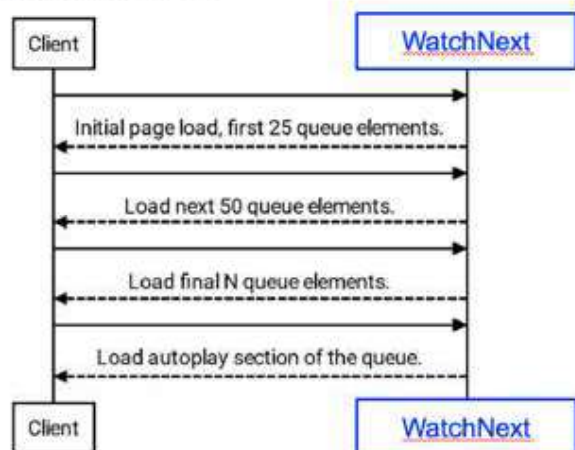
SONOS'S RESP. TO REQUEST FOR INFO
3/30/23 CV 06754-WHA

First, as noted in Sonos’s motion to strike, Google did not raise this argument in its contentions. Dkt. 463.02, pp. 7-8. That is improper under this Court’s rules, but it *also* creates severe prejudice for Sonos, which has never had an opportunity to take discovery about this theory. For example, discovery could have revealed that the cloud server providing the “service-recommended media items” in YTR did not maintain a remote playback queue, but rather, aggregated a new set of recommended videos upon each request and then provided that fresh set to fill the local playback queue of the requesting remote control. Put differently, if YTR generated fresh batches of ten media items at a time and sent them to the phone, there would be no “remote queue” even under Google’s new theory.

Dkt. No. 553 (Sonos Response to Court’s Request for Information) at 3

Sonos Fails To Distinguish The Accused Functionality For Limitation 1.4

49. As set forth in my Opening Report, Google's documents discuss and illustrate this process when a YouTube Sender initiates playback on a long playlist in which the Sender makes several calls to the WatchNext cloud server to obtain windows or "sections" of the Watch Next queue. See Schmidt Op. Report, ¶¶126-27.



GOOG-SONOSWDTX-00039785 [Server], 89 (annotated); Nicholson Dep. Tr., 58:9-25 (testifying that YouTube Music no longer uses a "GetMusicWatchNext" call and instead now uses a "GetWatchNext" call to the WatchNext service like YouTube Main), 71:3-73:12; see also, e.g., GOOG-SONOSNDCA-00073352 [Queuing in YouTube Main App], 62 ("The look-ahead is *extended continuously by watch next*. If the user keeps navigating forwards in the queue, they will be *presented with an endless set of videos*, populated by the first item in watch next for the previous video.")

- Sonos accuses ability to autoplay an "endless set of [recommended] videos" in the accused YouTube apps
- "endless set of videos" are not generated at once
- generated dynamically (one at a time in some apps)

Dkt. No. 467-7 (Schmidt Reply Rpt.) ¶ 49

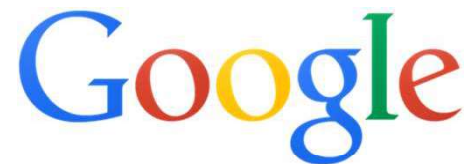
Service-Recommended Videos Invalidate The '033 Patent

CLAIM 1

- 1[pre].** A computing device comprising: **[1.1]** at least one processor; **[1.2]** a non-transitory computer-readable medium; and **[1.3]** program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:
- 1.4** operating in a first mode in which the **computing device** is configured for playback of **a remote playback queue provided by a cloud-based computing system** associated with a cloud-based media service;
 - 1.5** while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for the remote playback queue;
 - 1.6** while displaying the representation of the one or more playback devices, receiving user input indicating a selection of at least one given playback device from the one or more playback devices;
 - 1.7** based on receiving the user input, transmitting an instruction for the at least one given **playback device to take over responsibility for playback of the remote playback queue from the computing device**, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;
 - 1.8** detecting an indication that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device; and
 - 1.9** after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the remote playback queue and the computing device is no longer configured for playback of the remote playback queue.

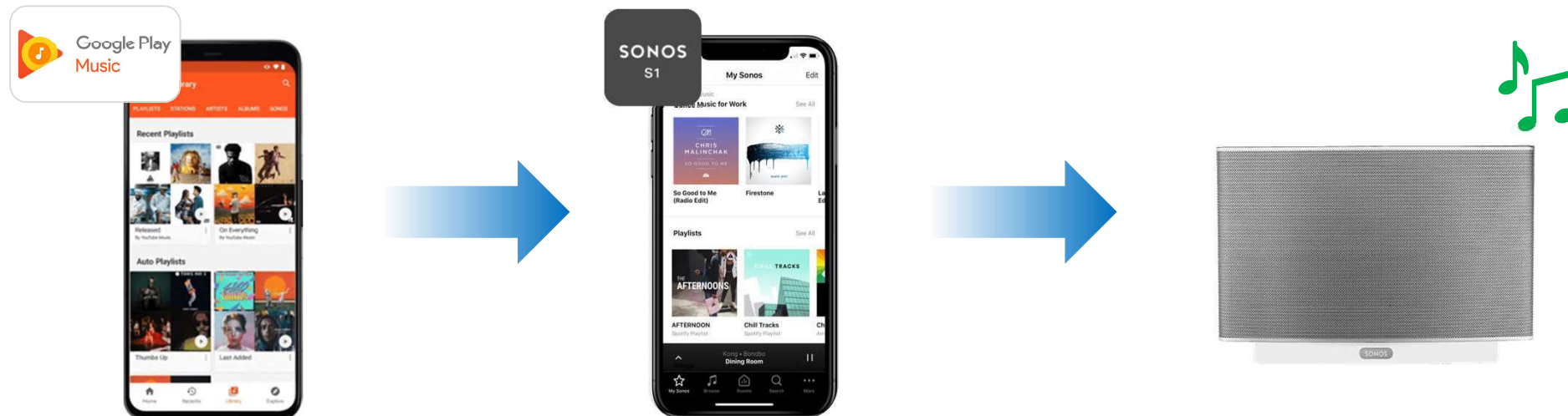
Google v. Sonos

Sonos's Motion for Summary Judgment



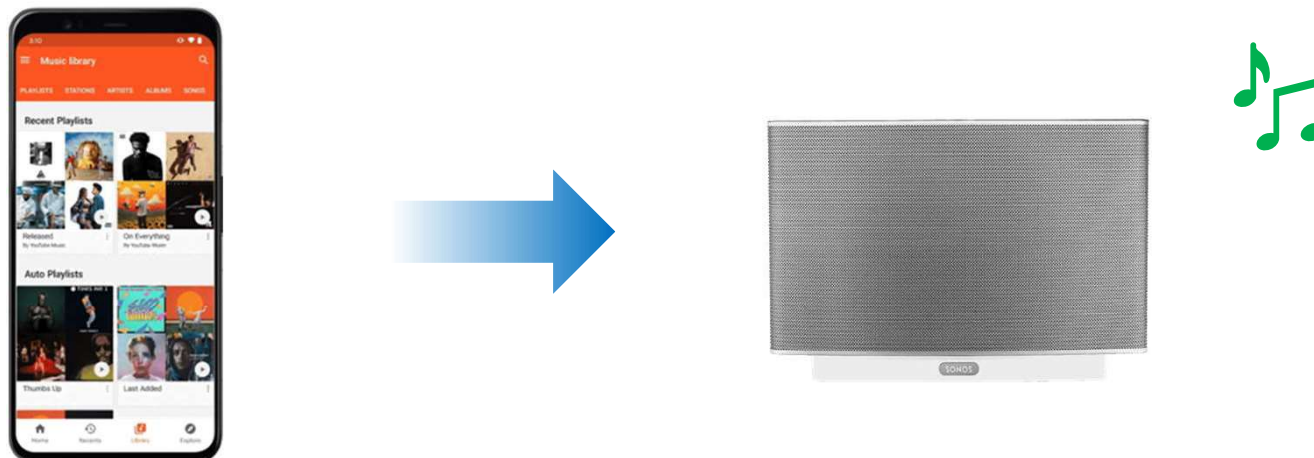
Google and Sonos Collaborate to Integrate Google Play Music with Sonos Speakers

- **Goal #1: SMAPI Integration**
 - Allow users to play music from Google Play Music to Sonos speakers **through the Sonos application**



Google and Sonos Collaborate to Integrate Google Play Music with Sonos Speakers

- **Goal #2: Direct Playback Integration**
 - Allow users to play music from Google Play Music to Sonos speakers **directly** from the **Google Play Music** application



Version 1 of the Direct Playback Integration Used Google's Media Route Provider Protocol



Kristen Bender

Q. What context do you -- you're familiar with the term "MRP," what it means. What is the context or what's your understanding as to what MRP, media route provider, relates to?

A. **A technical proposal or solution that would enable a Play-to-Sonos experience.**

8/23/2022 Bender Dep. Tr. at 60:10-15



Christina Valente

Q. Is there any relationship between SMAPI and MRP?

A. **No.**

Q. Did SMAPI use MRP?

A. **No.**

5/11/2022 Valente Dep. Tr. at 59:10-14



Keith Corbin

Q. Was the MRP a separate part of the integration?

A. **Separate from SMAPI?.**

Q. Like it was unrelated to SMAPI; right? MRP and SMAPI are unrelated; right?

A. **Correct.**

5/31/2022 Corbin Dep. Tr. at 69:20-25

Google Proposed Using Cloud Queues to Sonos for the Direct Playback Integration

Message

From: Debajit Ghosh [debajit@google.com]
Sent: 11/8/2013 3:40:58 AM
To: Tad Coburn [Tad.Coburn@sonos.com]
CC: Kristen Bender [Kristen.Bender@sonos.com]; teddyk@google.com; Paul Joyce [pauljoyce@google.com]; Ron Kuper [Ron.Kuper@sonos.com]
Subject: Re: a couple of Google Play Music / MRP questions

hi

From: Debajit Ghosh [mailto:debajit@google.com]
Sent: Thursday, November 07, 2013 4:28 PM
To: Tad Coburn
Cc: Kristen Bender; teddyk@google.com; Paul Joyce
Subject: Re: a couple of Google Play Music / MRP questions

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hey Tad,

sorry, yeah, i guess we've been talking to others about dogfood procedure and on the tech side about SMAPI, but not with your team in a few days -- apologies =).

1) we have thought about this only at a high level, but def challenges here as you mention. we're planning on chatting through this with some teams in a bit -- would def like to brainstorm but not quite ready for that. i'm actually hoping that having a more cloud queue centric model would help simplify things a bit (moving the interactions away from the device, quickly) -- that will be the next area of API proposals (first chatting with Jeff, will pull you in as soon as we have something we're comfortable with on our side).

2) yes, Yavor and i have chatted about this. he's going to think about it and will write up a proposal that we'll review -- can chat about that more once we have an impl plan we're comfortable with here. definitely on the roadmap!

thx, debajit

thanks, debajit

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GOOG-SONOSWDTX-00053825

On Thu, Nov 7, 2013 at 2:11 PM, Tad Coburn <Tad.Coburn@sonos.com> wrote:
 Debajit –

Thanks for the quick reply!

Re #1: The idea of moving the playlist to the cloud is very interesting, but will definitely complicate things. When we discussed “passing the beer test” originally, I was thinking we’d just put the playlist contents (URIs and metadata) in the cloud and keep control commands and events local (“local” meaning GPM app talks to MRP which talks over local network to the Sonos player). If you want to get rid of the Sonos MRP completely on iOS, you’ll need to route all commands (from the GPM app to the SonosMRP-in-the-cloud) and events (from the SonosMRP-in-the-cloud to the app through the cloud, and our SonosMRP-in-the-cloud will need a persistent, secure connection to each Sonos player that being controlled.

As embedded device folks, Sonos would love to give you very early feedback on any design in this area. We are keenly interested in ensuring that we could implement the necessary features in our player firmware within the code space or memory constraints of our current hardware.

- Tad

GOOG-SONOSWDTX-00053825

Version 2 of the Direct Playback Integration Used Cloud Queues

From: David DesRoches
Date: Tuesday, September 22, 2015 at 7:54 AM
To: Tad Coburn, Adam Graham, Jeff Torgerson, Keith Corbin
Cc: SW-Team-PCP-Player-Services, David Taylor
Subject: Re: GPM now supports Play to Sonos via Muse

+DaveT

Muse is live in the wild. Apparently Google shipped GPM for Android with Cloud Queue support.

From: Tad Coburn <Tad.Coburn@sonos.com>
Date: Tuesday, September 22, 2015 at 10:50 AM
To: Adam Graham <adam.graham@sonos.com>, Jeff Torgerson <jeff.torgerson@sonos.com>, Keith Corbin <Keith.Corbin@sonos.com>, Juergen Schmerder <Juergen.Schmerder@sonos.com>, Sherwin Liu <Sherwin.Liu@sonos.com>
Cc: dpd <david.desroches@sonos.com>, team <SW-Team-PCP-Player-Services@sonos.com>
Subject: GPM now supports Play to Sonos via Muse

At least for me! Works with the mainline firmware I have on players in my office. Woohoo!

Fyi, to confirm that it is really using Muse and not MRP, you can browse to the following web page on the Sonos player that you are casting to: <http://IP-ADDRESS:1400/status/api> and you will see something like this when you are "casting" the player. Note that the User Agent value "GooglePlayMusic/1995 (Android)" indicates the GPM app.

ID	Session Name	S
3	RINCON_00000386000002000:1#10	• gro • se • playbackStatus

Subject: GPM now supports Play to Sonos via Muse

At least for me! Works with the mainline firmware I have on players in my office. Woohoo!

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From: David DesRoches
Date: Tuesday, September 22, 2015 at 7:54 AM
To: Tad Coburn, Adam Graham, Jeff Torgerson, Keith Corbin, Juergen Schmerder, Sherwin Liu
Cc: SW-Team-PCP-Player-Services, David Taylor
Subject: Re: GPM now supports Play to Sonos via Muse


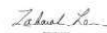


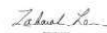

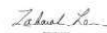

+DaveT

Muse is live in the wild. Apparently Google shipped GPM for Android with Cloud Queue support.

Ex. 21 (SONOS-SVG2-00070566)

The Content Integration Agreement Covers the Direct Playback Integration

The Content Integration Agreement ("CIA")

<p>SONOS</p> <p>SONOS, INC. CONTENT INTEGRATION AGREEMENT</p> <p>This Content Integration Agreement (the "Agreement") is entered into between Sonos, Inc., a Delaware corporation, and Google, Inc., the entity agreeing to these terms ("Licensee"). This Agreement will be effective as of the date last executed below ("Effective Date").</p> <p>RECITALS</p> <p>Service Provider operates an Internet-based music service providing content to consumers (referred to herein as the "Music Service").</p> <p>Sonos manufactures, markets and sells products comprising a wireless home music system (the "Sonos MMS") that facilitate consumer access to Internet-based music content and other media services that consumers can access, via online sources, such as the Music Service.</p> <p>Through the use of an application program interface developed by Sonos (the "Sonos API") provided under the terms of that certain API Evaluation and Development License Agreement (the "Development Agreement"), Service Provider has produced or will produce an application that allows consumers of the Sonos MMS to directly access, control and play content provided by the Music Service on or through the Sonos MMS (the result of these development efforts is referred to as the "Integrated Service Offering").</p> <p>NOW, THEREFORE, Sonos and Licensee agree as follows:</p> <p>1. INCORPORATION OF DEVELOPMENT AGREEMENT</p> <p>1.1. The following terms and provisions of the Development Agreement are hereby incorporated by reference into this Agreement, and made a part hereof: Sections 1, 9 and 10.</p> <p>2. DISTRIBUTION AND TERRITORY</p> <p>2.1. Music Service Territory. Subject to section 3.3 below, Service Provider will make available the Music Service for consumer use on or through the Sonos MMS in the form of the Integrated Service Offering in the countries specified in Exhibit B, as may be updated from time to time by the mutual written agreement of the parties (the "Territory") as set forth herein.</p> <p>3. DEVELOPMENT EFFORTS; INTELLECTUAL PROPERTY OWNERSHIP</p> <p>3.1. License From Sonos to Service Provider. Subject to the terms and conditions of this Agreement, Sonos grants to Service Provider, during the Term and in the Territory, a limited, royalty-free, non-transferable, non sub-licensable, non-exclusive, license under Sonos's intellectual property rights to use and make copies of the Licensed Software for the purpose of allowing the Integrated Service Offering to communicate with the Sonos API so that the Music Service may be offered via the Sonos MMS. All right, title and interest in and to the Licensed Software remain vested in Sonos and cannot be assigned, transferred or further distributed by Service Provider. Service Provider may make recommendations for modifications to the Licensed Software, and if Sonos elects to implement such modifications, all such modifications shall be owned by Sonos, without any obligation or residual license owing to Service Provider, except to the extent that ownership of such modification is covered by a separately executed written agreement by both parties, which separate agreement will be proposed by Service Provider prior to any communication to Sonos of such modification. For the avoidance of doubt, Sonos is not under any obligation to make modifications to the Licensed Software.</p> <p> Confidential Page 1</p> <p>HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY GOOG-SONOSNDCA-00055243</p>	<p>SONOS</p> <p>IN WITNESS WHEREOF, the parties hereto have executed this Content Integration Agreement as of the date last executed here.</p> <table border="0"> <tr> <td data-bbox="1213 552 1486 722"> <p>GOOGLE, INC.</p> <p>By:  2013.11.14 Name: Robert K. ... 13:16:44 Title: <small>General Counsel</small> -08:00' Date: _____</p> </td> <td data-bbox="1507 552 1780 722"> <p>SONOS, INC.</p> <p>By:  Name: Craig A. Shelburne Title: General Counsel Date: November 6, 2013</p> </td> </tr> </table> <p> Confidential Page 7</p> <p>HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY GOOG-SONOSNDCA-00055249</p>	<p>GOOGLE, INC.</p> <p>By:  2013.11.14 Name: Robert K. ... 13:16:44 Title: <small>General Counsel</small> -08:00' Date: _____</p>	<p>SONOS, INC.</p> <p>By:  Name: Craig A. Shelburne Title: General Counsel Date: November 6, 2013</p>
<p>GOOGLE, INC.</p> <p>By:  2013.11.14 Name: Robert K. ... 13:16:44 Title: <small>General Counsel</small> -08:00' Date: _____</p>	<p>SONOS, INC.</p> <p>By:  Name: Craig A. Shelburne Title: General Counsel Date: November 6, 2013</p>		

Sonos's Witnesses Admit the CIA Governed the Direct Playback Integration



Kristen Bender
Sonos Product Manager

Q. Exhibit 1021, the content integration agreement, this covered the SMAPI aspect of the Google/Sonos collaboration; correct?

A. Yes.

Q. And this covered as well the direct playback aspect of the Google/Sonos collaboration; correct?

A. Yes. Yes, to the best of my knowledge, yes.

...

Q. Ms. Bender, to the best of your knowledge, the content integration agreement entered into between Sonos and Google covered both Version 1 and Version 2 of the direct play integration part of the Google/Sonos collaboration; correct?

A. I would assume so.

Q. That's your understanding?

A. Yes.

8/23/2022 Bender Dep. Tr. at 221:23-222:9, 224:6-17

Sonos's Witnesses Admit the CIA Governed the Direct Playback Integration



Jeff Torgerson
Sonos Product Manager

Q. [D]irect control is a separate project from a SMAPI integration, right?

A. Yes, direct control is different than SMAPI, correct.

* * *

Q. But this reference to MRP in this agreement would suggest that this agreement isn't about SMAPI, right?

A. It appears it's not strictly SMAPI, correct.

8/11/2022 Torgerson Dep. Tr. at 188:13-17;189:4-10

Recitals of the Content Integration Agreement

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Page 11

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GOOG-SONOSNDCA-00055243

RECITALS

Service Provider operates an Internet-based music service providing content to consumers (referred to herein as the "Music Service").

Sonos manufactures, markets and sells products comprising a wireless home music system (the "Sonos MMS") that facilitate consumer access to Internet-based music content and other media services that consumers can access, via online sources, such as the Music Service

Through the use of an application program interface developed by Sonos (the "Sonos API") provided under the terms of that certain API Evaluation and Development License Agreement (the "Development Agreement"), Service Provider has produced or will produce an application that allows consumers of the Sonos MMS to directly access, control and play content provided by the Music Service on or through the Sonos MMS (the result of these development efforts is referred to as the "Integrated Service Offering").

GOOG-SONOSNDCA-00055243

Definition of “Provider Developments”

Sonos will not claim for itself . . . any right, title, or license to . . . the Provider Developments[.]”

Provider Developments: any and all development done by or on behalf of [Google] in creating the Integrated Service Offering

Integrated Service Offering: an application that allows consumers of the Sonos MMS to directly access, control and play content provided by the Music Service on or through the Sonos MMS

Sonos MMS: products that Sonos manufactures, markets and sells comprising of a wireless home music system

The CIA References Google's Media Route Provider ("MRP") Protocol

SONOS

SONOS, INC.
CONTENT INTEGRATION AGREEMENT

This Content Integration Agreement (the "Agreement") is entered into by and between Google, Inc., a Delaware corporation, and Google, Inc., the entity agreeing to the Agreement will be effective as of the date last executed below.

RECITALS

Service Provider operates an Internet-based music service provided herein as the "Music Service").

Sonos manufactures, markets and sells products comprising a wireless music management system ("MMS") that facilitate consumer access to internet-based music content that consumers can access, via online sources, such as the Music Service.

Through the use of an application program interface developed under the terms of that certain API Evaluation and Development Agreement”), Service Provider has produced or will produce an application program that will enable a user to access, control and play content provided by Sonos MMS to directly access, control and play content provided by Sonos MMS (the result of these development efforts is referred

NOW, THEREFORE, Sonos and Licensee agree as follows:

1. INCORPORATION OF DEVELOPMENT AGREEMENT

- 1.1. The following terms and provisions of the Development

2. DISTRIBUTION AND TERRITORY

- 2.1. **Music Service Territory.** Subject to section 3.3 below, Sonos Music Service for consumer use on or through the Sonos Service Offering in the countries specified in Exhibit B, at the mutual written agreement of the parties (the "Territory").

3. DEVELOPMENT EFFORTS: INTELLECTUAL PROPERTY OWNERS

- 3.1. License From Sonos to Service Provider. Subject to the Sonos grants to Service Provider, during the Term and in non-transferable, non-sublicensable, non-exclusive, license rights to use and make copies of the Licensed Software Integrated Service Offering to communicate with the So offered via the Sonos MMS. All right, title and interest invested in Sonos and cannot be assigned, transferred or Service Provider may make recommendations for modifications. Sonos elects to implement such modifications, all such without any obligation or residual license owing to Service ownership of such modification is covered by a separate parties, which separate agreement will be proposed by communication to Sonos of such modification. For the any obligation to make modifications to the Licensed So

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GOOG-SONOSNDCA-00055243

3.3. Approval of Music Service. By execution of this Agreement and subsequent delivery of the Integrated Service Offering to Sonos, Service Provider hereby notifies (or will notify) Sonos that the Integrated Service Offering is ready for final compatibility testing and approval for commercial launch (collectively, "Launch Approval"). Sonos shall perform the requisite quality assurance testing to verify compatibility with the Sonos MMS, in accordance with Sonos's customer quality standards. To the extent that Sonos requires additional integration work to be done to meet Launch Approval, Sonos shall notify Service Provider, with a reasonable level of detail on the issues to be addressed. Service Provider shall use its commercially reasonable efforts to further modify the Integrated Service Offering to deliver a compliant beta offering as soon as is reasonably practicable. This process shall continue until Launch Approval is given in writing by Sonos. Notwithstanding the foregoing, the Integrated Service Offering may not be made commercially available by Sonos unless and until Google provides final Launch Confirmation in writing, which confirmation may be contingent on Sonos' adoption of Google's Remote Media Route Provider protocol. For the avoidance of doubt, it shall be considered a material breach of this Agreement if either party promotes, advertises or otherwise publicly discloses the Integrated Service Offering prior to receipt of Launch Approval and Launch Confirmation.

GOOG-SONOSNDCA-00055243

That the CIA References the Use of An API From Sonos Is Irrelevant

SERVICE INTEGRATION AGREEMENT

Whereas, through the use of application program interface(s) developed by Sonos, the Parties wish to allow End Users to play the Content Service over the Sonos System either (a) by controlling the Content Service within the Sonos Application or (b) by playing to the Sonos System from within the Content Service Application.

2018 SIA Recitals (Dkt. 479-3)

CONTENT INTEGRATION AGREEMENT

Through the use of an application program interface developed by Sonos (the “Sonos API”) provided under the terms of that certain API Evaluation and Development License Agreement (the “Development Agreement”), Service Provider has produced or will produce an application that allows consumers of the Sonos MMS to directly access, control and play content provided by the Music Service on or through the Sonos MMS (the result of these development efforts is referred to as the “Integrated Service Offering”).

2013 CIA Recitals (Dkt. 479-4)

Sonos's Counsel Was Not Involved in Negotiating the CIA



Alaina Kwasizur
Sonos Counsel

Q. Were you involved in the negotiation of th[e] [Content Integration] agreement . . . ?

A. This original agreement, no.

...

Q. Are you familiar with any of the specific communications between Google and Sonos that were exchanged as part of the negotiations that led to the execution of [the Content Integration Agreement]?

A. No.

Q. And are you aware of any of the specific communications related to the execution of this agreement . . . ?

A. No.

11/30/2022 Kwasizur Dep. Tr. at 44:7-9, 47:19-48:2

Sonos Breached The CIA

Section 3.4 of the Content Integration Agreement



SONOS

SONOS, INC.
CONTENT INTEGRATION AGREEMENT

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Service Provider may make recommendations for modifications to the Licensed Software, and if Sonos elects to implement such modifications, all such modifications shall be owned by Sonos, without any obligation or residual license owing to Service Provider, except to the extent that ownership of such modification is covered by a separately executed written agreement by both parties, which separate agreement will be proposed by Service Provider prior to any communication to Sonos of such modification. For the avoidance of doubt, Sonos is not under any obligation to make modifications to the Licensed Software.

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Page 11

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GOOG-SONOSNDCA-00055243

3.4. Ownership of Service Provider Intellectual Property Rights. The Music Service, the Provider Developments (as defined below), and any and all intellectual property rights arising from or related thereto are and shall remain the sole and exclusive property of Service Provider. Sonos will not claim for itself or for any third party any right, title, interest or licenses to the Music Service or Provider Developments, except for the limited license granted herein. The Provider Developments consist of any and all development work done by or on behalf of Service Provider in creating the Integrated Service Offering, and any code or other materials owned or controlled by Service Provider and included by Service Provider in the Integrated Service Offering, excluding the Licensed Software, under the terms of the Development Agreement.

GOOG-SONOSNDCA-00055243

Sonos Files The '906 Provisional Purporting To Cover The CQ API

Application for a United States Patent
United States Patent and Trademark Office

Title: Cloud Queue

Inventor(s): Steven Beckhardt
Arthur L. Coburn, IV



Steve Beckhardt
Sonos "Named" Inventor

Q. Earlier you had testified that you had filed a patent on the cloud queue API. Do you recall that?

A. Yes.

Q. Is this the patent that you were referring to?

A. I think so.

11/17/2022 Beckhardt Dep. Tr. at 93:8-14

Sonos Files A 2014 Patent Disclosure (The '906 Provisional) Entitled "Cloud Queue" And Obtains Patents Purporting To Cover The CQ API

Application for a United States Patent United States Patent and Trademark Office

Title: Cloud Queue

Inventor(s): Steven Beckhardt
Arthur L. Coburn, IV

II. Example Cloud Queue

Queues in the Cloud

Terminology

CloudQueue - a Sonos "queue" which exists in the cloud. A Sonos player synchronizes to a CloudQueue and uses it as a source of track to be played.

"queue" in this context refers to the list of tracks that is actively being played by a Sonos player. Think of a CloudQueue as a replacement for the queue data structure stored within a Sonos player.

CloudQueue Sync Protocol (or API) - an application-level network protocol (or set of methods and events) used by a Sonos player to stay synchronized with a CloudQueue. This protocol allows the Sonos player to update very quickly when changes are made to the CloudQueue.

CloudQueue API - a set of application-level network protocols used to browse, edit, and control playback of a CloudQueue.

Statement

Putting the queue has the following possible advantages:

- allow control of a Sonos player from a device that is not on the LAN where the Sonos player lives; this opens up a number of possible social scenarios
- avoid RAM limitations on Sonos players
 - the number of tracks in the queue can be unlimited and can far exceed the number of tracks that a Sonos player could store in RAM

Sonos Amended the '033 Patent in 2019 to Cover CQ Technology

based on receiving the user input, transmitting an instruction for the at least one given playback device to take over ~~playback~~ responsibility for playback of the remote playback queue ~~the given audio content to be transferred from the computing device to,~~ wherein the instruction configures the at least one given playback device such that i) an identifier of the given audio content and a playback position for the given audio content are provided to the given playback device and ii) the given playback device becomes configured for playback of the given audio content based on the identifier and the playback position to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item

Google's Opposition, Ex. 25

Cloud Queue Was Not Sonos's "Pre-Existing Intellectual Property"



Keith Corbin
Sonos Director of
Product
Management

Q. And prior to the Play to Sonos work that you did with Google, had you heard of the Sonos [*sic*] having Cloud Queue API?

A. Not that I'm aware of.

Ex. 3 to Google's Opposition (Corbin Tr.) at 29:11-17,36:2-17

Sonos Had Concerns About Using the Cloud Queue API for Its Own Development



David DesRoches
Sonos Software
Development Manager

Q. So even though you personally had concerns about ownership of the Cloud Queue or the Control API specifications in terms of who owned it between yourself and Google, Sonos nevertheless used portions of both of these specifications for internal development for the Spotify integration; is that accurate?

A. Yes, that's accurate.

...

Q. Why were you concerned that there was not an ownership agreement between Google and Sonos for the Cloud Queue API specification?

A. I -- I knew that Sonos wanted the API to be part of the developer program that we discussed earlier. And, you know, I was -- you know, as an engineering manager, I was concerned about whether we had the freedom to change it to, you know -- to, you know, meet our needs and specifications.

Ex. 22 (11/22/2022 DesRoches Dep. Tr.) at 64:4-12, 60:15-20

Sonos Shares the Cloud Queue API with Spotify

To: Andrew Schuler[Andrew.Schuler@sonos.com]; Nick Millington[Nick.Millington@sonos.com]; Ben Smith[Ben.Smith@sonos.com]; Tad Toulis[tad.toulis@sonos.com]; David DesRoches[david.desroches@sonos.com]
 From: Tad Coburn[Tad.Coburn@sonos.com]
 Sent on behalf of: Tad Coburn <Tad.Coburn@sonos.com>
 Sent: Thur 4/23/2015 12:11:34 PM Eastern
 Subject: RE: follow up thought on Spotify mtg
 Attachment: PDSW-CloudQueueRESTAPI-230415-1203-82.pdf

Andy –

Here's a link to our Cloud Queue REST API on Confluence. You should be able to export as a PDF to save you time.

Re: ability to push updates to eSDK: In our previous meeting (where we discussed the eSDK-based approach), Michael @ Spotify explicitly told us that they don't have a way to push eSDK updates to any of the speakers in the field, and that they don't really expect to have such a mechanism in the foreseeable future. Some speaker makers may provide a way for customers to manually update the fw on their speaker, so I agree, we don't know about that.

- Tad

From: Andrew Schuler
 Sent: Thursday, April 23, 2015 11:36 AM
 To: Tad Coburn; Nick Millington; Ben Smith
 Subject: RE: follow up thought on Spotify mtg

I don't think we know what their speaker makers may provide a way for customers to manually update the fw on their speaker, so I agree, we don't know about that.

Tad – you said we had cloud queue REST API on Confluence. I searched the page and it does not have any references to the “G” company ☺ except in a few comments. You should be able to export as a PDF, which will not include the comments (and thus will not reference the “G” company). I’ve attached the PDF to save you time.

From: Tad Coburn
 Sent: Thursday, April 23, 2015 11:23 AM
 To: Nick Millington; Andrew Schuler
 Subject: follow up thought on Spotify mtg
 Spotify said they don't want to support the current protocol for speakers.

To: Andrew Schuler[Andrew.Schuler@sonos.com]; Nick Millington[Nick.Millington@sonos.com]; Ben Smith[Ben.Smith@sonos.com]; Tad Toulis[tad.toulis@sonos.com]; David DesRoches[david.desroches@sonos.com]

From: Tad Coburn[Tad.Coburn@sonos.com]

Sent on behalf of: Tad Coburn <Tad.Coburn@sonos.com>

Sent: Thur 4/23/2015 12:11:34 PM Eastern Daylight Time

Subject: RE: follow up thought on Spotify mtg

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Andy –

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- Tad

SONOS-SVG2-00140005

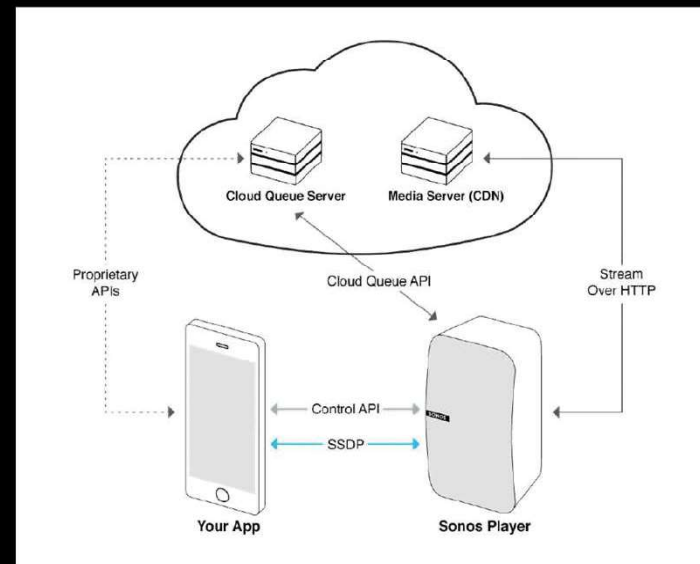
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SONOS-SVG2-00140005

Sonos Shares the Cloud Queue API with Pandora

PANDORA® + SONOS

Sonos Cloud Queue API



24

SONOS-SVG2-00111339 at 24

Sonos Presents the Cloud Queue API to its Music Service Partners

Message
From: Tad Coburn [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B459166ED3F349F79704FC]
Sent: 6/24/2015 9:43:19 AM
To: David DesRoches [david.desroches@sonos.com]
Subject: RE: Partner Summit

This is super exciting! I can't wait to hear more when you get back.

Did you and/or Keith get a chance to mention the SMAPI getUserInfo() API idea peoples reaction.

From: David DesRoches
Sent: Wednesday, June 24, 2015 12:32 PM
To: SW-Group-PCP
Subject: Partner Summit

All,

The first (annual?) Music Partner Summit is going on right now in SB. Yesterday I presented "The Sonos Control API" (what we know as Muse and Cloud Queue) to an array of movers and shakers representing 88% of the streaming on Sonos. You can see the whole list of attendees and presentations at <https://confluence.sonos.com/x/yCKwAw>.

There will be more write up after. I wouldn't say we had the room deeply engaged yet, although the demo of Sonar and Encore (stereo pair!) got everyone jazzed. Everyone is still feeling us (and their competitors) out regarding committing to Sonos-specific development. But I think we are building the right message and foundation. There were definitely some "when can I ship on this" questions during my roadmap slides. Time will tell.

Shoot me any questions you have. Today's topics are Customer Data (analytics), SMAPI, and a town hall with JMac. Cheers!

David DesRoches
 Sonos | Sr. Manager, Software Development | david.desroches@sonos.com

From: David DesRoches
Sent: Wednesday, June 24, 2015 12:32 PM
To: SW-Group-PCP
Subject: Partner Summit

All,

The first (annual?) Music Partner Summit is going on right now in SB. Yesterday I presented "The Sonos Control API" (what we know as Muse and Cloud Queue) to an array of movers and shakers representing 88% of the streaming on Sonos. You can see the whole list of attendees and presentations at <https://confluence.sonos.com/x/yCKwAw>. Mine was "Control API v5".

There will be more write up after. I wouldn't say we had the room deeply engaged yet, although the demo of Sonar and Encore (stereo pair!) got everyone jazzed. Everyone is still feeling us (and their competitors) out regarding committing to Sonos-specific development. But I think we are building the right message and foundation. There were definitely some "when can I ship on this" questions during my roadmap slides. Time will tell.

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David DesRoches
 Sonos | Sr. Manager, Software Development | david.desroches@sonos.com

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SONOS-SVG2-00070620

SVG2-00070620

The Purported Written Description Sonos Relies On Fails

In another example of an application determining a playlist and/or other content for playback, **a user enjoys listening to music on an online music service (e.g., turntable.fm** or other virtual room that a user can enter to choose from a plurality of online disc jockeys (DJs) deciding what to play next) **using his Mac Book Pro™** at home. He likes the unique user experience the service offers, and he frequently hops from room to room discovering new music. To maximize sound quality, he plays the music on his household playback system (e.g., Sonos™). **A button or other indicator can be added to the turntable.fm Web application to switch the content being played to the playback system for output (e.g., to the Sonos™ system rather than or in addition to the Mac Book™).** While Web-based applications typically do not have access to items on a local network certain embodiments enable a third-party Web-based application (e.g., Turntable.fm) to talk to a playback system (e.g., Sonos™) in a certain way (e.g., may have to log in with a username and password), and the identified user has **the website send audio or audio and video down to a playback device** (e.g., a zone player) on the playback system local network to play music there (or some other media).

Mot. at 5 (citing '033 patent at 12:65-13:3)

Sonos's Novation Defense Fails

The Case Law Does Not Support Novation

Novation “is a **highly fact-specific inquiry**” that “is not generally suitable for disposition on summary judgment.”

See, e.g., Harper v. Charter Commc’ns, LLC, No. 2:19-cv-00902 WBS DMC, 2019 WL 3683706, at *6 (E.D. Cal. Aug. 6, 2019)

Novation is only found when “it ‘**clearly appear[s]**’ that the parties intended to extinguish rather than merely modify the original agreement.” “[I]t does not ‘clearly appear that the parties intended to extinguish rather than merely modify the original agreement’” where the subsequent contract “**does not reference the original [] agreement** in any manner.”

Malveda v. Experian Info. Sols., Inc., No. 21-cv-07244-RS, 2022 WL 94921, at *2-3 (N.D. Cal. Jan. 10, 2022)

“A novation requires an **express release** by the party entitled to enforce a promise.”

Vallely Invs., L.P. v. BancAmerica Com. Corp., 88 Cal. App. 4th 816, 832 (2001)

Section 12.8 of the 2018 Service Integration Agreement

DocuSign Envelope ID: F0717732-C898-4362-BE12-B9B51E526DD0

SONOS

SONOS, INC.
SERVICE INTEGRATION AGREEMENT

This Service Integration Agreement ("Agreement") is entered into as of the date of the last signature below "Effective Date" between Sonos, Inc., a Delaware corporation ("Sonos"), and Google, LLC, incorporated in the state of Delaware ("Service Provider"), each may individually be known as a "Party" and collectively the "Parties".

Parties

Whereas, Service Provider op...

Whereas Sonos manufactures room audio system.

Whereas, through the use of End Users to play the Content within the Sonos Application Application.

Now therefore the Parties her...

1. Definitions

1.1 "Affiliate" means such Party, that...

1.2 "Confidential" is other that is cla... or disclosed in... should have rec... treated as confi... known to recip... available throug... without a duty o...

1.3 "Content Servi... operated and o...

1.4 "Control" mean... direction of the determination is of its voting or otherwise.


1.5 "Direct Control Sonos System"

1.6 "End User" me...

1.7 "Intellectual Pr... or domestic, in... trademarks, kno... rights, rights of... of any governm...

1.8 "Launch Appro... experience and Experience or the Direct Control Experience.

1.9 "Marks" means either Party's respective trademarks, logos, service names, and/or trade names, whether registered or otherwise used as an identifier of goods or services. Marks



Confidential

SONOS-SVG2-00059332

12.8 Entire Agreement. This Agreement, including its attachments, constitutes the entire agreement between the Parties regarding its subject matter, and supersedes all prior communications, negotiations, understandings, agreements or representations, either written or oral, by or among the Parties regarding its subject matter. To the extent Sonos or Service Provider and/or their employees are required to click through or otherwise indicate acceptance of any standard agreements or terms and conditions in order to access materials, related documentation, test accounts, software or other materials to be provided and used for activities authorized pursuant to this Agreement, this Agreement shall govern.

2018 SIA § 12.8

Sonos's Own Witnesses Admit the 2018 SIA Covers YouTube Music



Alaina Kwasizur
Sonos's Counsel

Q. Were you involved in any agreements between Sonos and YouTube?

A. The -- well, YouTube Music is covered in the 2018 agreement.

Opposition Ex. 35 (11/30/2022 Kwasizur Tr. Dep. at 129:15-21)

The 2018 SIA Addresses Sonos's YouTube Music Integration

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SONOS

SONOS, INC. SERVICE INTEGRATION AGREEMENT

This Service Integration Agreement ("Agreement") is entered into as of the date of the last signature below "Effective Date" between Sonos, Inc., a Delaware corporation ("Sonos"), and Google, LLC, incorporated in the state of Delaware ("Service Provider"), each may individually be known as a "Party" and collectively the "Parties".

Recitals

Whereas, Service Provider operates an Internet-based service providing audio content to consumers.

Whereas Sonos manufactures, markets, and offers products and technology comprising a wireless multi-room audio system.

Whereas, through the use of application program interface(s) developed by Sonos, the Parties wish to allow End Users to play the Content Service over the Sonos System either (a) by controlling the Content Service within the Sonos Application or (b) by playing to the Sonos System from within the Content Service Application.

Now therefore the Parties hereby agree as follows.

1. Definitions

- 1.1 "Affiliate" means, with respect to a Party, any corporation or entity worldwide that Controls such Party, that such Party Controls, or that is under common Control with such Party.
- 1.2 "Confidential Information" means any non public information shared by one Party with the other that is clearly and conspicuously marked as "confidential" (or with a similar designation) or disclosed in a manner in which the discloser reasonably communicated, or the recipient should have reasonably understood (under the circumstances) that the disclosure should be treated as confidential. "Confidential information" does not include information that: (a) was known to recipient without restriction before receipt from discloser; (b) is or becomes publicly available through no fault of recipient; (c) is rightfully received by recipient from a third party without a duty of confidentiality; or (d) is independently developed by recipient.
- 1.3 "Content Service" means the cloud-based service providing audio content to consumers operated and controlled by Service Provider.
- 1.4 "Control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and operating policies of the entity in respect of which the determination is being made, or of its assets, whether by way of ownership of more than 50% of its voting or equity securities or assets, contract, management agreement, voting trust, or otherwise.
- 1.5 "Direct Control Experience" means the experience whereby an End User may control the Sonos System from within the Service Provider App.
- 1.6 "End User" means any end user of a Sonos Product and the Content Service.
- 1.7 "Intellectual Property Rights" means any and all rights, titles and interests, whether foreign or domestic, in and to any and all trade secrets, patents, copyrights, service marks, trademarks, know-how, or other intellectual property rights, as well as any and all moral rights, rights of privacy, publicity and similar rights of any type under the laws or regulations of any governmental, regulatory, or judicial authority, foreign or domestic.
- 1.8 "Launch Approval Guidelines" means the documented process steps ensuring the minimum experience and performance thresholds to be met prior to public release of the Sonos App Experience or the Direct Control Experience.
- 1.9 "Marks" means either Party's respective trademarks, logos, service names, and/or trade names, whether registered or otherwise used as an identifier of goods or services. Marks



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SONOS-SVG2-00059332

Google LLC
1600 Amphitheatre Pkwy, Mountain
View, CA 94043

Attention: **YouTube Legal**

Email: legal-notices@google.com

Exhibit B:

Support Guidelines

These guidelines identify how Sonos provides support and how **YouTube Music** agrees to share escalation responsibilities with Sonos.

The 2013 CIA Addresses Sonos's Google Play Music Integration

SONOS

SONOS, INC.
CONTENT INTEGRATION AGREEMENT

This Content Integration Agreement is made between Sonos, Inc., a Delaware corporation, and Google LLC, a Delaware corporation, and shall be effective as of the date of execution by both parties.

Service Provider operates an online music service, herein as the "Music Service"

Sonos manufactures, markets and distributes ("Sonos MMS") that facilitate consumers can access, via online

Through the use of an application ("App") under the terms of that certain "Agreement", Service Provider provides Sonos MMS to directly access Sonos MMS (the result of the

NOW, THEREFORE, Sonos and

1. INCORPORATION OF DE

1.1. The following terms and conditions shall be incorporated by reference into this Agreement, and made a part hereof: Sections 1, 9 and 10.

2. DISTRIBUTION AND TERRITORIES

2.1. Music Service Territory. Service Provider shall provide Music Service for consumers in the mutual written

3. DEVELOPMENT EFFORT

3.1. License From Sonos. Sonos grants to Service Provider a non-transferable, non-exclusive license to use and modify the Integrated Service offered via the Sonos app, which is owned and vested in Sonos and

Service Provider may make reasonable modifications to the Integrated Service and Sonos elects to implement such modifications, all such modifications shall be owned by Sonos, without any obligation or residual license owing to Service Provider, except to the extent that ownership of such modification is covered by a separately executed written agreement by both parties, which separate agreement will be proposed by Service Provider prior to any communication to Sonos of such modification. For the avoidance of doubt, Sonos is not under any obligation to make modifications to the Licensed Software.



Confidential

Page | 1

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

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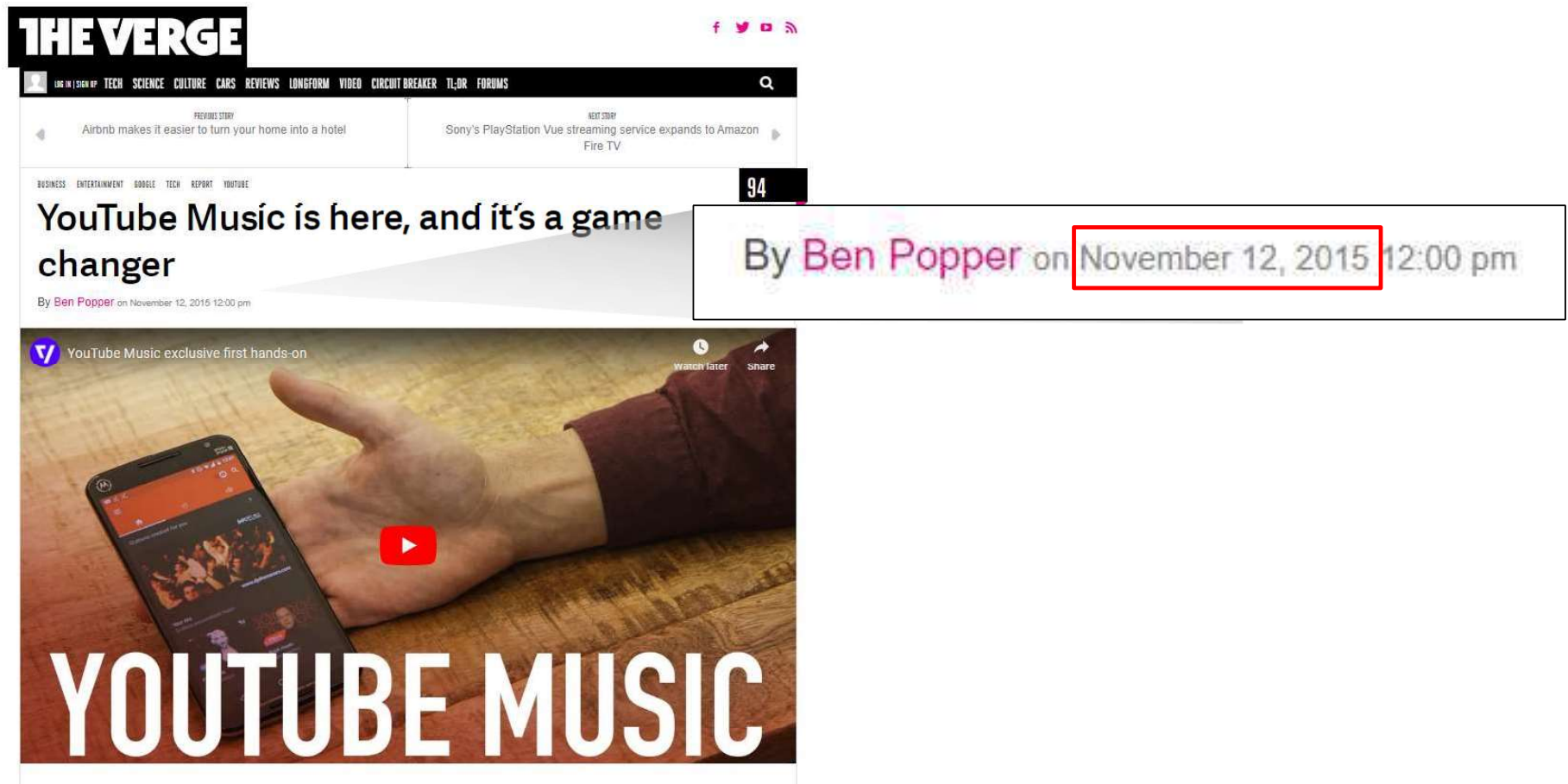
EXHIBIT B TERRITORIES

Territories that have **Google Play Music Services** as of October 15, 2013:

4.5. Service Provider will maintain a page within its primary website (e.g. currently **play.google.com**) where Sonos customers will be able sign-up for an account with Service Provider.

2013 CIA § 4.5 and Exhibit B

YouTube Music Launched Long After the Collaboration



<https://www.theverge.com/2015/11/12/9723496/youtube-music-app-offline-background>

The YouTube Team Operated Independently of the Google Play Music Team

Google: I had an introductory call this past week with Richard Wheeler, the new HW partnership lead for Google Play Music, reporting into Zahavah Levine, Director of Global Music Partnerships (BD). He will be the key partnership owner going forward and will be the day-to-day relationship manager. He's been with Google for under 6 weeks and is working on coming up to speed. Highlights from the call:

- Sonos is his #1 priority at this time but he will also be focusing on partnerships with carriers, OEMs and other CE manufacturers. He admits that Google is late to the game compared to other music services in pursuing these partnerships, but it will be a focus as distribution channels are critical to them for growth.
- Just as Google got a head start over Spotify in Canada, they're laser focused now on Japan. Although they've got more work to do to launch GPM there, they feel as if they're closer than anyone else.
- The "L" release is slated for this fall and the teams may be pulled off of Sonos work from time to time to work on that as it is the company priority.
- Integration of Songza into the product is also a top priority as the investment there was to improve their music product.
- Richard wants to be pulled into all of our standing calls to get up to speed on progress as well as be included in any upcoming F2F meetings. His focus will be ensuring we're aligned on executing a great product experience and also maximizing our partnership opportunities. We've set up a recurring 1:1 to stay in sync.

YouTube Music: Had a check in call with Aaron Luber, Director of Business Development for YouTube, to get an update on the status of their service launch amidst all of the rumors. Highlights from my conversation:

- YouTube Music is taking longer to roll out than planned, but they're taking their time to get to a better product offering rather than launching quickly. This includes a combined Google Play Music offering for \$9.99 month.
- They've had two significant employee losses, Shiva Rajaraman who lead YouTube's Product Management team, departed recently to take a VP of Product role at Spotify (curious move for Spotify – a video play in their future, perhaps?). Chris LaRosa, product manager for the music service, departed to work on a start up called Flux Factory.
- The new PM for the music service is Ann Turner, we will be getting an introduction shortly.
- The timing for a GA launch is still TBD. They will be launching an invite only beta in mid-late September to test the service and then ramping up to get more users. Sonos will be part of the initial external beta testing pool. I've requested 5 accounts split between SB and Camb.
- The YouTube Music team has gotten a SMAPI implementation working. This, of course, is for their audio-only service but the team says its working well.
- The technical team has also gotten music playing directly from the YouTube Music app to a Sonos speaker (for both iOS and Android – audio only, not audio from video). This was not done in collaboration with the GPM team, they built basic P2S functionality given their experience working with Chromecast as well as the Dial protocol. This was a fast hack together to demonstrate the ability to play to Sonos directly from the music app, but they want to engage with us soon to figure out the experience.
- Because the timing around launch is taking longer than expected, they'd like to explore a "Beats Music-like" launch on Sonos for GA.
- The name "YouTube Music Key" is indeed the name of the service for now, per the rumors. This is likely to change once they get through beta testing.

Opposition Ex. 41 (SONOS-SVG2-00083495)